***United States Court of Appeals***

***for the Second Circuit***

# APPENDIX

# Nos. 74-1584, 74-1636

In the

# United States Court of Appeals

## For the Second Circuit

SCIENTIFIC HOLDING COMPANY, LTD, AN ILLINOIS CORPORATION,

*Plaintiff-Appellant,*

*vs.*

PLESSEY INCORPORATED, A DELAWARE CORPORATION,

*Defendant-Appellee.*

**APPENDIX.**
**Volume IV (Pages 1311-1669)**


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UNITED STATES COURT OF APPEALS
FILED
SEP 24 1974
DANIEL FUSARO, CLERK
SECOND CIRCUIT



Gunthorp-Warren Printing Company, Chicago • 346-1717

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MR. McCONNELL: That is all.

THE COURT: Thank you. You are excused, Mr. Clarke.

(Witness excused.)

MR. McCONNELL: I recall Mr. Kovar.

E. A L L A N K O V A R, recalled as a witness on behalf of the plaintiff, having been previously sworn, testified further as follows:

DIRECT EXAMINATION

BY MR. McCONNELL:

Q Mr. Kovar, do you have an opinion as to the sales and profits you could have made if permitted to remain in management for the balance of the measuring year?

MR.MALONEY: Objection.

THE COURT: I am going to sustain that.

MR. McCONNELL: Can I make an offer on that when we are through?

THE COURT: You can make an offer, sure.

MR. McCONNELL: That is the only further examination I want to ask. I do have some documents, your Honor. Why don't I just go through them, put them in evidence, and if there is an objection --

THE COURT: Go through them and if there is no objection, they will be received.



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MR. McCONNELL: Plaintiff's Exhibit 7, which is Mr. Sinsheimer's wire back. I think that is in as a defendant's exhibit, but I want it in as a plaintiff's exhibit.

MR. MALONEY: No objection.

xx (Plaintiff's Exhibit 7 received in evidence.)

MR. McCONNELL: Plaintiff's Exhibit 15, which is a schedule of March expenses outside the contract.

MR. MALONEY: I will object to that one because I don't know who prepared it or where it came from.

THE COURT: Let me see it.

Ask the witness who prepared it.

BY MR. McCONNELL:

Q I show you Plaintiff's Exhibit 15, Mr. Kovar, and ask you if you can identify that?

A That is Mr. Hourihan's writing.

Q Did you ask Mr. Hourihan to prepare a schedule of expenses outside the contract?

A For the month of March I did.

Q These would be expenses that were not to be charged against ISL under the earn-out?

A That is correct.

THE COURT: Do you recall this?



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THE WITNESS: Yes, it was not intended as an exhaustive kind of thing, but to give me an estimate of what sort of expenses were excludable under the earn-out.

THE COURT: And what about Sam Lords?

THE WITNESS: I believe that would have been someone staying there, someone from Plessey.

THE COURT: Sam Lords Castle is a hotel down in Barbados,and the story is that a couple of hundred years ago during the time of the pirates there were people there who take donkeys along the shore with lanterns, and ships would come along and see the lanterns and think they were coming into harbor and pile up on the rocks, and then the boys at Sam Lord's would clean out the ships, if you are interested.

I don't think I will receive this.

MR. MALONEY: Your Honor, I would withdraw my objection to this if Mr. McConnell would similarly accommodate me with respect to the shipping schedules so we don't have to bring someone here and go through them invoice by invoice. If not, I will continue my objection.

THE COURT: I won't let it in.

Q I show you Plaintiff's Exhibit 13 and ask you if you can identify that?



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MR. MALONEY: Same objection, your Honor.

A This is a copy of Mr. Hourihan's report on the April expenses outside of the contract.

THE COURT: Nothing to show on this or the other one how these things were made up?

THE WITNESS: When they were made up --

MR. MALONEY: With respect to this document, I have an additional objection, because it refers to Peter Hewitt and $504, I guess, is an excluded expense.

THE COURT: I suppose that is intended to be his travel from Portugal to Barbados?

MR. MALONEY: I don't know.

THE COURT: I don't think there is enough here to show that Hourihan knew what was supposed to be in the contract and what wasn't.

MR. McCONNELL: I offer Plaintiff's Exhibit 57 in evidence, which is a handwritten memo prepared by Mr. Gretton.

MR. MALONEY: I would object to this unless Mr. McConnell would like a voir dire with Mr. Gretton. It was never sent to Mr. Parr.

MR. McCONNELL: That is what it shows.

THE COURT: I will hold this one marked for identification, and I take it Mr. Gretton has been sitting



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around for a long time. Maybe someone will ask him about it.

MR. McCONNELL: All right, when we get to that.

I offer Plaintiff's Exhibit 60 in evidence, a letter under date of August 5, 1970.

THE COURT: Well, I think I have to go to this other hearing. I am going to adjourn now for the day.

MR. McCONNELL: We will get it worked out overnight.

THE COURT: We will meet at 10 o'clock tomorrow morning, ladies and gentlemen.

Thank you very much for your patience.

(Jury excused.)

THE COURT: I would like to see counsel in the robing room tomorrow morning at 9.30.

(Adjourned to March 20, 1974, at 9.30 A.M.)



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March 20, 1974,
9:30 A.M.

--

(In the robing room.)

THE COURT: What I would like to do is to tie up any loose ends here and give you a chance to make motions. I want you to rest before the jury when they come in, and then I want you to go ahead.

MR. McCONNELL: On my offer?

THE COURT: Offer of what?

MR. McCONNELL: Of what Kovar would have testified to if permitted to.

THE COURT: Go ahead.

MR. McCONNELL: I think I would like to do it by question and answer.

THE COURT: That will take too much time. My point on this is he was not there; he was very much of an interested party; he thinks he has been defrauded. There is nothing in the evidence to indicate his prior opinions when he was running it were borne out, and I am not going to let him express an opinion now. If as a result of the defendant's case you want to bring it up again on rebuttal,



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I will entertain that. But I am letting you have an exception.

MR. McCONNELL: I have an exception. Let me just put it on the record.

THE COURT: All right.

MR. McCONNELL: I offer to prove that --

THE COURT: You don't offer to prove anything. You offer the opinion of Mr. Kovar.

MR. McCONNELL: This is my offer of proof as to what Mr. Kovar would testify to.

The question would be whether or not he had an opinion as to what sales and profits he could have made if permitted to remain in management for the balance of the measuring year, to which he would have answered then as to what that opinion was, that they could have made two million four, and on sales of two million four realized a profit of $360,000. And then he would state the basis of that opinion, namely, his knowledge of the business, his knowledge of the market, his knowledge of the customers, the fact that the 1970 budget had been reviewed by Plessey and found to be viable and realistic, the fact that as late as May, 1970, Tucker had again forecast sales of three million eight, which is consistent with the sales that were forecast back in December of three million six,



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which he, Kovar, then reduced to two million four, the incidents to which Mr. Tucker testified which caused the loss of potential sales during the balance of the measuring year, the existing customer relationships -- I think that is about it.

Now, just briefly, your Honor, I understand what your position is on this, but with all due respect I think the points your Honor makes go to the weight, and I think Mr. Maloney can argue those points to the jury, that this opinion is entitled to little weight because of X, Y and Z. But I believe the cases clearly hold that an officer of a corporation can testify as to his opinion as to what sales and profits would have been based on his experience with the company but for the claimed interference.

That was the case in Bigelow. The testimony there was that if the plaintiff's theatre had enjoyed a prior run, it would have made the same grosses and net revenues as did the competing Maryland Theatre. That was the testimony in Zenith-Hazeltine. Joe Wright, the president of Zenith, got on the stand and said but for the Canadian pool he would have enjoyed the same percentage of the Canadian market as he enjoyed of the United States market during the relevant time and would have made X sales on that percentage and Y profits.



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That was subject to cross-examination; that was subject to countervailing proof. and the defendant argued that it was entitled to little weight. But the Supreme Court said that was credible evidence, itwas admissible evidence, and the credibility was for the trier of the facts.

THE COURT: Is there anything you would like to say about this?

MR. MALONEY: About the opinion testimony, your Honor?

THE COURT: Yes.

MR. MALONEY: I think there is no factual basis upon which Mr. Kovar could express an opinion. The history of this company was that of losses; the prior projections of sales and delivery and profits were always wrong, and there has to be some basis for qualifying Mr. Kovar as capable of giving an opinion. I think there has been a complete failure of proof by the plaintiff with respect to the fact that thesales which they showed on either of the projections were at all realizable. It may be one thing for an officer to give an opinion as to whether or not he could have made a profit on the sales, but here we have a complete failure of proof that any of those sales on the early projections could have been made.



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The only one who gave any factual evidence whatsoever of orders which we may have lost was Tucker. I don't think Kovar is in any position to express an opinion as to whether those price quotations were adequate or whether the company would have performed at a profit.

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There is no testimony to establish the basis upon which Mr. Hourihan prepared the budget. I think before you get to giving opinions about whether the budget is adequate you have to have an opinion as to how the budget was prepared. We used a calculator and it appears to us it is a straight mathematical computation and is not based on any fact or cost control system or any experience in the past. There has been no testimony to such effect. All the figures come out to the exact percentages all along the way. There is nothing to indicate that that budget was prepared in relationship to the actual cost that would be incurred with respect to the particular projected orders. I think there is no basis upon which Mr. Kovar could be qualified to express an opinion.

THE COURT: Well, I am going to adhere to my position, but I will give you a chance after the defendant's case and on rebuttal.

Do you want to make a motion, Mr. Maloney?

MR. MALONEY: At this time the defendant would



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like to move for a directed verdict dismissing the complaint entirely on the following grounds:

Jurisdiction of this court is based solely upon diversity of citizenship, and we believe all the issues should be resolved in accordance with the laws of the State of New York. The parties voluntarily entered into an agreement in paragraph 19 of the February 4th agreement, Plaintiff's Exhibit 3, that the law of the State of New York would govern the contract which the parties signed on February 4th.

Now, with respect to the most simple claim, the claim of fraudulent intent, I believe there has been a complete failure of proof to show that at the time Plessey signed the agreement of February 4th, the February 18th or the March 2nd amendment, that anyone at Plessey then had an intention not to live up to the terms of any part of the contract or the amendment. I believe under the cases we have cited in our trial memorandum, under the law of New York, the plaintiff when attempting to prove fraudulent intent cannot rely solely upon alleged future breaches of the agreement, but must show not by a preponderance of the evidence, but by clear and convincing evidence that the promising party had no intention to live up to the promise at the time the promise was made.



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Secondly, with respect to the claim for punitive damages, under the law of New York no punitive damages may be awarded based solely upon breach of contract theory. Therefore, if the fraud claim fails, the claim for punitive damages must fail.

Now, even if the plaintiff up to this point in the case has introduced evidence which in your Honor's judgment would leave some question of fact for the jury to consider that there may be clear and convincing evidence, I still think there has been a complete failure of proof with respect to punitive damages, because notwithstanding the alleged fraud, under the law of New York a simple fraud and deceit claim is not sufficient to support a claim for punitive damages, but you must show outrageous conduct.

I believe the cases we have cited in our trial memorandum show that that must be established under the exhaustive review made by the Second Circuit. I can't recall the name of the case. We cite it in our trial memorandum. It is almost tantamount to a burden of proof in showing criminal negligence and neglect. I believe there has been a complete failure with respect to that. I, therefore, think the fraud claim and the claim for punitive damages should be dismissed based on a complete failure of proof.



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Turning to the claim for breach of contract, I think the parties have both agreed that the language that ended up in the contract is ambiguous. I think that there has been -- just based on the plaintiff's own evidence and the value of the plaintiff's own witnesses to explain their position and how that language got into that contract, because on the evidence that's been introduced to date, they are estopped from raising any claim that the language means what they say it means. I think the critical document in that respect is the letter from Mr. Matthew Murray, sent in February, 1971, to Mr. Sinsheimer. The testimony was clear from Carlen and Lewis and everyone else that Mr. Murray was in on the meetings. He reviewed the letters that were sent to Mr. Sinsheimer in June, 1970. These gentlemen laid a trap for Mr. Sinsheimer and that's clear. They looked this contract over. They looked over Kovar. They said, "This lawyer cannot run a business. Let's see what Plessey can do, and if Plessey doesn't do well, then we will come in toward the end of the measuring year and we will start making threats about the contract meaning something other than what they ever said it meant back in June, 1970." Mr. Lewis, by December 1, 1971, still couldn't get straight in his mind what he intended to mean by the word "average."



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His affidavit in December, 1970, he would have us believe that average meant three months, June, July and August, and now, not even the plaintiff is brash enough to make any complaint that you can distort the word "average" to that extent.

I think whatever the ambiguity in the contract, the evidence up to this point estops them from claiming that it means what both of the parties seem to agree it meant at the time of the takeover when the plaintiff failed to challenge it.

Notwithstanding that, if there is any doubt that the plaintiff is estopped with respect to the interpretation of the language and the takeover was one month premature, I think there has been a complete failure of proof with respect to any type of compensatory damage that can be awareded for breach of contract. I think we have thoroughly demolished the projections of the plaintiff by showing through the admissions of Mr. Tucker and Mr. Kovar themselves that those orders which we put on the board in the first group, the customers for which they had received no orders by May 26, 1970, were completely out of the picture by that date because they had either failed to build prototypes or they had obtained orders which they lost because they could not deliver on time.



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With respect to the second group of orders where we showed a vast difference -- again I think it was $436,000 between the projection and the actual order. Not once did any of the plaintiff's witnesses attempt to rebut our contention that the additional projected orders were any longer available or that Plessey did anything in breach of the agreement which resulted in not obtaining those orders.

That leaves us with the $855,000 of released orders on Mr. Kovar's projection in May, 1970.

Now, once again he claimed that when you add on the unreleased orders it added up to 1 million 3, but there has not been the slightest scintilla of evidence to show whether or not those orders should have been released or whether or not they were -- the releases were not forthcoming because of any fault by Plessey.

Now, Mr. Tucker, as the national sales representative, certainly would have known whether any further releases should have been made under those orders and whether the failure to make releases was due to conditions in the industry or due to fault by Plessey.

His testimony is completely silent on those orders. I think we also effectively demolished his testimony with respect to the orders which we failed to



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obtain because of pricing.

According to my calculations, he mentioned total orders adding up to $1,700,000 which we should have obtained.

Now, there may be some question of fact as to whether or not we should have obtained the orders, but assuming the jury resolved all of those questions of fact against us in each instance, there is no evidence in the record with respect to the $117,000 order from Weismantel.

Certainly Mr. Tucker, as the national sales representative, should have known if that order was given to someone else. He was still asking us for a quote on the very same order in February, 1971.

With respect to the Honeywell/Framingham order which he said we should have obtained in the amount of $300,000, he admitted himself on the stand that under normal circumstances there would only have been a three-week period during the measuring year in which any deliveries could have been made.

That could not account for any more than $50 or $60 thousand based on the unit price that he himself assigned to the order.

With respect to the Technology Marketing order



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which he said would have amounted to $1,000,000, as much as he thought and twisted, he identified the document from Technology Marketing as being the document upon which the order would have been based, and that document clearly indicates that only the five prototypes and the 115 unit pilot run would have been delivered in 1970.

Actual production on the $10,000 unit order, in black and white, based on the documents, shows that it would not start until 1971-72.

Now, the plaintiff made no attempt to introduce any evidence as to what percentage of the 10,000 units could have been delivered in the first three months of the measuring year. We have made a straight mathematical calculation, therefore, which is favorable to the plaintiff, because, I believe, the testimony is under normal circumstances you build up your volume.

As the order goes along, you are able to make a greater number of units. Taking a straight mathematical calculation and assigning the 10,000 units over a two-year period, dividing by 24 and multiplying by 3, I believe that comes up with something around $50,000 which could be shipped in January, February and March.

The 120 units that could have been shipped in 1970 add up to $40,000. So, that million dollar



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order becomes an order of $80,000 which we lost under the best of circumstances.

Now, those three orders alone, the $1,000,000 order, the $300,000 order and the $117,000 order add up to approximately 1 million 4 of the total of 1 million 7 that he mentioned, leaving the other 300,000, which I think we have demolished, but at this time I will not take the time to go through each of the smaller orders.

If you assigned this company a profit of 33 per cent, which is,I think, approximately three times the profit on their own budget -- if they profited 360,000 on a budget of 2 million 4, by my calculation that's something like a 12 per cent profit.

If we give them a one-third profit on the additional $300,000 of orders, that's only another $100,000.

Now, taking all of those orders together, we had sales of 1 million 3. Therehas been testimony by the plaintiff that the break-even point, based on their budget, is $135,000 a month. We do not concede that's accurate because we think the budget is hot air. It was just made up on a calculator.

But, if you carry the $135 a month break-even figure out to 12 months, that means the company needed



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sales, according to my calculation, of $1,350,000 for 10 months, plus $270,000 for an additional two months, which is somewhere in the neighborhood of $1,600,000.

So, if you credit the additional orders which Tucker mentioned, taking account of the percentage of those orders which could be delivered during the measuring year, add them to our actual sales of 1 million 3, you just about approach what the plaintiff itself claims was the break-even point, and there is no further evidence that there could have been any additional sales beyond that break-even point.

Now, of course, we have marked for identification, and it is not in evidence yet, the financial statements showing the $600,000 loss.

I believe Mr. Sinsheimer testified that to the best of his knowledge the company lost $600,000.

There has been not the slightest attempt by the plaintiff to challenge any portion of that loss.

Let us assume that the accountant was suffering from some serious malignity and that he has doubled the loss, so it is only $300,000.

By my calculation, giving them again a one-third profit, which is three times the profit they budgeted, that means they would have to come up with an



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additional million dollars of sales over and above anything in this record to wipe out that $300,000 loss again to get to the break-even point.

Now, your Honor, we have sympathy for the shareholders of the plaintiff, too. We don't like to see people lose their money, but Plessey put $2,000,000 into this business.

We didn't put $800,000, we put $2,000,000 into it and we lost $600,000.

There has been a complete failure of proof here and I most respectfully suggest that there is no need to keep either the Court or the jury tied up any longer with this case, and we are entitled to a directed verdict with respect to every count in the complaint.

THE COURT: Well, as I indicated to you yesterday, I am going to deny your motion. I would rather think the plaintiff has made out a prima facie case on breach and that average provision. I think perhaps they made out a prima facie case as to the operations in good faith. I think there is a jury question here as to what is called fraud.

The evidence isn't very strong, but I think on your cross-examination you brought out quite a statement out of Mr. Kovar. I think the jury has got to consider



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that.

I don't think there is anything to the plaintiff's point as to whether they had authority to sign those amendments on March 2, that was the date.

I don't think there is anything to your estoppel argument either.

Putting yourself in the position of the parties after Plessey took over, I can't quite see why at that point the plaintiff would have to run around and raise that point.

I don't think there is anything to the estoppel.

The question of damages is a difficult one. If the jury thinks that there was fraud and they think there was a breach of contract here, I think they would be in a position to award damages to the plaintiff.

So, let's go ahead and hear the defendant's case and then see where we go.

MR. MALONEY: All right, your Honor.

- - -



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(Trial resumed; jury present.)

THE COURT: Good morning, ladies and gentlemen. It's nice to see you this morning.

All right, Mr. McConnell.

MR. McCONNELL: Your Honor, we have a few exhibits left to offer.

I offer Plaintiff's Exhibit 59, which is a letter from Parr to Huntoon, under date of July 30, 1970.

MR. MALONEY: No objection to 59.

THE COURT: It's received.

xx (Plaintiff's Exhibit 59 received in evidence.)

MR. McCONNELL: I offer Plaintiff's Exhibit 60, which is a letter from Launius to Vince Huntoon, under date of August 5, 1970.

MR. MALONEY: We object to that one, your Honor.

THE COURT: Let me see it.

(Exhibit handed to Court.)

THE COURT: I will receive that.

xx (Plaintiff's Exhibit 60 received in evidence.)

MR. McCONNELL: I offer Plaintiff's Exhibit 63, which is a Telex to Mr. Gretton from Mr. Doherty, under



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date of January 14, 1971.

MR. MALONEY: We object to that, your Honor.

THE COURT: Let's see it.

MR. MALONEY: It's Miss Doherty, by the way. I think Mr. McConnell said Mr. Doherty.

MR. McCONNELL: I just said Doherty. I dont know whether it's Miss, Mrs. Ms. or Mr.

3 MR. MALONEY: The time for these exhibits is when Mr. McConnell cross-examines Mr. Gretton.

THE COURT: I don't see that it makes much difference, really. This is one that I have trouble reading.

MR. McCONNELL: It's very difficult. I agree.

THE COURT: All right, I will receive 63. I take it Mr. Gretton is going to testify and he will testify about that.

xx (Plaintiff's Exhibit 63 received in evidence.)

MR. McCONNELL: I offer Plaintiff's Exhibits 74, 75 and 76.

MR. MALONEY: We object, your Honor.

THE COURT: What are these things?

MR. McCONNELL: These are comparisons between the matrix plan and the ICL brochure prepared by Crocker



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in the ISL 1970 budget which shows what they were forecasting and what we were forecasting.

THE COURT: I won't receive this at this time. We will hold that.

What is the next?

MR. MALONEY: 74, 75 and 76.

MR. McCONNELL: I offer 82, which is a Telex relating to the Magnavox prototype qualification dated 3/17/71.

MR. MALONEY: Can I see the one you have?

I have no objection to this one.

THE COURT: That will be received.

xx (Plaintiff's Exhibit 82 received in evidence.)

MR. McCONNELL: I offer Plaintiff's Exhibit 83, which is a letter from Parr to Crocker, under date of February 9, 1971.

MR. MALONEY: We have no objection to this one, your Honor.

THE COURT: All right, 83 is received.

xx (Plaintiff's Exhibit 83 received in evidence.)

MR. McCONNELL: I offer a series of Telexes which are marked Plaintiff's Exhibits 67, 84, 85, 86, 87



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and 88, and which relate to the dismissal of Parr and the hiring of Weber in February of 1971.

MR. MALONEY: I object to those, your Honor.

THE COURT: Yes, I am going to sustain the objection on those.

MR. MALONEY: That was 67 and 84 through 88, Mr. McConnell?

THE COURT: Right.

MR. McCONNELL: I think so.

I offer Plaintiff's Exhibits 68 and 69, which relate to the settlements with sales representatives on commissions.

MR. MALONEY: I object to these, your Honor, on the ground they are beyond the end of the measuring year in addition to --

MR. McCONNELL: It relates to whether or not they lived up to the obligations to the sales reps under the purchase agreement.

MR. MALONEY: Mr. Tucker could have testified to that.

THE COURT: Yes, I think I will sustain the objection to those.

MR. McCONNELL: I offer Plaintiff's Exhibit 79, which is a report or memorandum from Mr. Kinkhoph to Mr.



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Sinsheimer, Mr. Clarke and Mr.Crocker, under date of November 6, 1969.

MR. MALONEY: I object to this one, too, your Honor.

THE COURT: Let me see it.

MR. McCONNELL: Your Honor, Mr. Kinkhoph is saying it's going to take at least 12 months to enter the U.S. market starting from scratch.

MR. MALONEY: This document indicates copies were to go to Mr. Sinsheimer and Mr. Clarke, and I think Mr. McConnell had a fair opportunity to question both of those gentlemen about the document. I don't think it can be introduced in this way.

MR. McCONNELL: It comes from their file.

THE COURT: I take it, it's a memorandum in the normal course of business. I will receive Exhibit 79.

xx (Plaintiff's Exhibit 79 received in evidence.)



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THE COURT: You don't have to offer everything on your list. The jury and I have got a lot of exhibits. Don't feel you just got to put them all in.

MR. McCONNELL: I offer Plaintiff's Exhibit 103, which is the 1969-1970 Plessey annual report.

105, which is the Plessey annual report for 1971-'72.

And 106, which is the Plessey annual report for 1970-'71.

MR. MALONEY: Objection on the grounds of relevancy. They obviously are reports, but I don't see what they have to do with the litigation.

THE COURT: I will receive them.

(Plaintiff's Exhibit 103, 105 and 106 received in evidence.)

xx

MR. McCONNELL: I offer 107, which is the Plessey Incorporated annual report for 1970.

THE COURT: That is the American company?

MR. McCONNELL: That is the American company.

MR. MALONEY: No objection.

xx

(Plaintiff's Exhibit 107 received in evidence.)

MR. McCONNELL: That is it, your Honor. Plaintiff rests.

THE COURT: You heard the plaintiff has rested,



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ladies and gentlemen. That is a landmark in the course of this trial. Now we proceed to hear the defendant's case.

You may proceed, Mr. Maloney.

MR. MALONEY: The defendant calls Mr. Keith Jones.

K E I T H P. J O N E S, a witness called on behalf of the plaintiff, being first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. MALONEY:

Q Will you state your full name and address for the record?

A My name is Keith Percival Jones and my address is St. Joseph, Barbados.

Q Mr. Jones, try to keep your voice up a little bit. Hearing is not good back here.

Will you tell the court and his Honor how you are employed?

A I am a partner in Price, Waterhouse & Company, Barbados, Trinidad, and Tobago.

Q Would you tell us something about your educational background and experience?

A I was educated in London and I joined the accounting profession in 1943 with the firm



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of practicing accountants in London, and after a period of service in the Royal Air Force qualified as a private accountant in 1952, and I have remained in the profession since that time. I joined Price Waterhouse in Trinidad in b2 1960 and I became a partner in 1966.

Q When were you first assigned to Barbados?

A I went to Barbados in October, 1966.

Q Would you tell us something about your practical experience as an accountant?

A I have had a fairly wide range of audit experience and I also handled tax and various other aspects of accounting, such as receiverships, liquidations, but primarily audit work.

Q Explain to his Honor and the jury what is involved in audit work primarily?

A I would say an audit is an examination by an auditor of the books and records of a company or firm in conjunction with the underlying vouchers, with the prime objective of enabling the auditor to form an opinion as to the fairness of the financial statements and of the operating results of the business.

Q Are there certain tests that you carry out in order to verify the accuracy of the client's books and records and financial statements?



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A Yes, generally we carry out tests on each aspect of the items appearing in the accounts, the items in the balance sheet and the items in the profit and loss account.

Q Tell us a few of the types of tests you would perform to make that verification.

A Yes, in the case of fixed assets we would examine title deeds, check for the cost of additions, test for depreciation calculations, and, generally speaking, we go through the various items in the balance sheet carrying out routine audit tests which are required for the verification of those items.

Q Did there come a time when Price Waterhouse was retained by International Scientific Limited?

A I didn't heat the question.

Q Did there come a time when Price Waterhouse was retained as auditors by International Scientific Limited?

A Yes.

Q When was that?

A In 1966 we were first appointed.

Q How long did you remain the auditors for International Scientific Limited?

A We remained until the 31st December, 1969, and then we became the auditors to the successor company, International Scientific (1970) Limited.



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Q Did you prepare audited statemnts for ISL for 1966, 1967 and 1968?

A We did.

(Defendant's Exhibit DT marked for identification.)

Q I show you DT for identification and ask you if you can identify that document.

A Yes, I can.

Q Will you tell us what that document is?

A These are the financial statements for ISL for the year ended 31st December 1968.

Q At whose request were those statements prepared?

A At the request of ISL.

Q Was Mr. Kovar the president of ISL at that time?

A I believe he was.

MR. MALONEY: We offer the document in evidence.

MR. McCONNELL: No objection.

(Defendant's Exhibit DT received in evidence.)

Q Did there come a time when you were asked to prepare an audited statement for the fiscal year 1969 for ISL?

A Yes.

Q Do you recall who requested you to prepare that statement?

A The letter was signed by Mr. Hourihan to carry



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out the 1969 audit.

Q Do you recall when that was?

A No, I am afraid I can't recall it.

Q I show youDefendant's Exhibit BC for identification and I ask you if you can identify that document.

A Yes, I can identify that document.

Q Will you tell his Honor and the jury what this document is?

A These are the balance sheet and accounts of ISL for the year ended 31st December 1969.

MR. MALONEY: I offer it in evidence.

MR. McCONNELL: May I see the document to make sure it is the same as the one I have?

I am going to object, your Honor. The cover letter shows a sign-off date as June 21, 1971, a year and a half after the year end, and as appears from the notes in the financial statement it is prepared on the basis of information learned subsequent.

THE COURT: I think it all goes to the weight. Is there any doubt that this is the audit that was made?

MR. McCONNELL: I am objecting to it on the grounds it takes into account matters that were not known and could not have been known to Mr. Hourihan at the time he prepared his statement in 1969.



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THE COURT: I think it all goes to the weight of it. I will receive it.

xx (Defendant's Exhibit BC received in evidence.)

Q Mr. Jones, I show you Defendant's Exhibit AZ and ask you if you can identify that document.

A Yes, I can identify that document.

Q Would you tell his Honor and the jury what this document is?

A It is a balance sheet for the year to 31st December 1969, for International Scientific Limited prepared by Mr. Hourihan.

Q Did there come a time, Mr. Jones, when Plessey asked you to prepare a comparison of the audited statement for December 31, 1969, which you had prepared and Defendant's Exhibit AZ, the statement for December 31, 1969, which Mr. Hourihan had prepared?

A I don't recall a specific request for comparison. We were asked to prepre an audited balance sheet for that year.

Q But do you recall at a later date whether anyone asked you to compare the differences between your audited statement and the statement which Mr. Hourihan had prepared?

A Yes, we did have a request for comparison.

xx (Defendant's Exhibit BG marked for identification.)



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Q Mr. Jones, I show you Defendant's Exhibit BG for identification and ask you if you can identify that document.

A Yes, I can identify that document.

Q Would you explain to his Honor and the jury what this document is, Defendant's Exhibit BG?

A Basically these schedules are a comparison of the warranted and audited balance sheets as at 31st December 1969 with explanatory notes on the various schedules.

Q Turning to schedule 1 of Defendant's Exhibit BG there are certain words appearing in the first column and then three columns of numbers headed Warranted Audit Increase and Decrease.

Would you explain what those headings signify?

A The warranted column is a straightforward listing of the items which appeared in the warranted balance sheet.

Q That would be the statement prepared by Mr. Hourihan, Defendant's Exhibit AZ?

b3 A That is correct.

Q What would the second column be?

A These were the figures which appeared in the 1969 audited accounts.

Q That would be Defendant's Exhibit BC?

A Yes.



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Q What would the third column be?

A That is either the increase or decrease between the individual figures which appeared in both sets of accounts.

Q What are the additional schedules attached to Defendant's Exhibit BG?

A The second schedule is an explanation rating back to schedule 1, and there is in schedule 1 a fourth column which shows the points with individual numbers, and those numbers are explained on schedule 2.

THE COURT: Your points are, in effect, notes explaining these items?

THE WITNESS: That is correct.

Schedule 3 is of the same category.

Schedule 4 is a summary of the increase in the net worth deficit and it summarizes the variations which are appearing on schedule 1.

Q On schedule 1, the bottom of that schedule says Deficit Net Worth and there are various numbers in the three columns.

Would you explain to his Honor and the jury what those numbers are?

THE COURT: Tell us what you think deficit net worth is?



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THE WITNESS: Deficit net worth is the excess of the company's liabilities over its assets out of which it can meet those liabilities.

THE COURT: So if you have a deficit net worth it means you have liabilities in excess of your assets?

THE WITNESS: That is correct.

Q And based upon your comparison was the net worth deficit higher or lower when your audited statement was compared with Mr. Hourihan's warranted statement?

A The deficit net worth was higher.

Q By that figure of $113,300 appearing in the third column on schedule 1?

A That is right.

Q I take it your testimony is that schedule 4 is an explanation of that $113,300 figure?

A Yes. In the schedule 1 we used bracket and non-bracket figures which are sometimes difficult to understand. So on schedule 4 we prepared a more straightforward statement of pluses and minuses.

Q Well, what do the parenthesis indicate on schedule 1?

A I'm sorry, I didn't hear you.

Q When a number appears in parenthesis or brackets on schedule 1 what did that indicate?



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A In the case of assets it is an increase of the deficit net worth. In the case of liabilities a non-bracketed item is also an increase in the deficit of net worth and that is why we eventually show them separately.

Q What are schedules 5 and 6?

A Schedule 5 is a history of the good will item which appeared in the balance sheet as at 30th of June, 1970, and it is extended to show movement as far as the 30th of June, 1972.

Q How about schedule 6? The same thing?

A That is a history of the provision for doubtful debts or an explanation of the provision for doubtful checks.

Q And schedule 7?

A I'm sorry. Schedule 6 is a continuation of the good will. Schedule 7 is the provision for doubtful debts account.

MR. MALONEY: I offer Defendant's Exhibit BG in evidence.

MR. McCONNELL: Your Honor, I am going to object. This comparison was made as of a much later date in point of time, a year and a half after the year end. It is made on the basis of information learned or disclosed subsequent to information which could have been made known to Hourihan and Tucker.



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MR. MALONEY: We don't agreed.

THE COURT: I will receive it. You may argue that.

xx (Defendant's Exhibit BG received in evidence.)

Q Mr. Jones, in connection with preparing the audited statement for 1969, Defendant's Exhibit BC, did you follow consistent accounting principles in preparing that statement with the accounting principles that had been applied in preparing the statement in 1968 which has been introduced as Defendant's Exhibit DT?

A Yes.

Q Were you in 1969 and 1970 thoroughly familiar with the accounting principles that were used in preparing the financial statements of ISL?

A Yes.

Q Referring to Defendant's Exhibit BG would you tell us what the principal items were which accounted for the increase of net worth deficit, the amount of $113,300?

A There are really two main items, the first one being a reduction in the evaluation of the inventory which is shown here as $72,930, and the second item is an increase in accounts payable and accrued expenses of $33,822.

Q Turning to point 2 on schedule 2, would that be the explanation of the $72,000 decrease in the value of inventory based on the audited statement?



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A It is.

Q What was the principal item which accounted for the decrease in the value of inventory?

A The principal item is one of $58,500, which was a mathematical error in that the quantity of the item concerned was taken at 30,000,000, instead of 1.3 million.

Q What was the item that that related to?

A Cores.

Q Memory cores?

A Memory cores.

Q And how many memory cores had Mr. Hourihan included in his warranted statement?

A 30,000,000.

Q And based upon your audited statement how many memory cores were there?

A 1.3 million.

Q And that represented as far as the value of the difference in the amount of cores, that is the figure $58,500?

A That is correct.

Q I see another number in parenthesis on schedule 2 under point 2 which would be the inventory item $21,000. Could you explain that item?

A That was material which had been taken as raw

material for inventory purposes and also as work in progress material, so, in fact, it was duplicated in the valuation of the inventory.

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THE COURT: I think the jury may want to have that explained. You have two categories: one is raw material that is material available for manufacture, and the second one is material that is already in the process of being manufactured in the shop? Is that correct? You treat them separately?

THE WITNESS: That is right.

Q What had Mr. Hourihan done in his warranted statement?

A He had included the raw material in both raw material inventory and in working progress inventory.

Q I think the second major difference you mentioned was the increase in the accounts payable and accrued expenses of $33,822, and turning to point 6 on schedule 2 could you explain to his Honor and the jury what that number represents?

A As part of our audit custom we searched to ascertain that all liabilities had been included in the accounts at the closing balance sheet da e, and as a result of our tests we found additional liabilities of $32,465.

Q Turning to Mr. Hourihan's warranted statement of March 2, 1970, turning to the profit and loss statement,

what does Mr. Hourihan report as the net loss for the year 1969?

A $399,353.

Q What did you report as the net loss for the year 1969 based on your audited statement, Defendant's Exhibit BC?

A $544,323.

Q That would be a difference of approximately $145 in the loss for the year?

MR. McCONNELL: I'm sorry. Could you point out to me where you read this from?

THE WITNESS: Yes.

MR. MALONEY: We are comparing the profit and loss statement which Mr. Hourihan gave at the closing, which is Defendant's Exhibit AZ, showing a net loss for the year of $399,353, with the audited statement for '69 on which Price Waterhouse reported a net loss for the year of $544,323, and that is Defendant's Exhibit BC.

I think I then asked a question what would the approximate difference be.

THE WITNESS: $145,000.

Q One further question. On your comparison, Defendant's Exhibit BG, turning to schedule 5, it says History of Good Will at Takeover.



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Can you explain to his Honor and the jury what thatschedule is intended to show?

THE COURT: Well, let's start by asking what is good will fromam accounting point of view? Perhaps the jury and I could focus on what you mean by good will.

A The basic concept of good will on an asset and liability takeover situation is the excess of the money to be pay for the net assets you acquire, and in this case we had assets of 1.23 million and liabilities of 1.41 million, leaving an excess of liabilities, which means that at takeover the taking over company acquired an excess of liabilities over assets.

Q That would be the figure of $180,025?

A That is correct.

Q Those were liabilities over and above any assets which could have been used to satisfy those liabilities?

A That is right.

Q How is the $360,025 figure arrived at?

A In addition to taking over the excess of $180,025 by way of liabilities, Plessey also paid a consideration of $180,000, which means that the total of good will at that point in time was $360,000.

THE COURT: Is that because there is really no other place to put it, so you put it under good will?



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There are no tangible assets to which you could charge it?

THE WITNESS: No.

THE COURT: That is really the reason?

THE WITNESS: It forms part of the total consideration.

Q So is it a fair statement that at that point Plessey had invested $360,000 for which there were no existing assets that could be sold to obtain repayment of those funds at that point in time?

MR. McCONNELL: I don't know that. We don't know what this business had as a going concern.

THE COURT: I think that question is not clear. I think we will leave it as I understand it as a matter of accounting here, that since the liabilities exceeded the assets by $180,000, the only thing the buyer could charge that to would be good will.

THE WITNESS: That is correct.

THE COURT: And if he paid another $180,000 down payment, as was done here, that was an additional amount he was paying for good will, making a total of $360,000?

THE WITNESS: That is right.

Q Mr. Jones, I show you a copy of Plaintiff's Exhibit 3 in evidence and I ask you if you can identify that document.



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A Yes, I can identify this document.

Q What is that document, Mr. Jones?

A It is an agreement dated the 4th day of February, 1970, between Plessey Company Limited and International Scientific Limited.

Q Are you familiar with the term measuring year?

A Yes, I am.

Q What was your understanding of the measuring year with respect to the agreement between Plessey and ISL?

A The year running from the 1st of April, 1970, to 31st March, 1971.

Q Did there come a time that Plessey requested that Price Waterhouse prepare an audited financial statement in connection with that measuring year?

A Yes.

Q I show you Defendant's Exhibit BE for identification and ask you if you can identify that document.

THE COURT: I have that document.

MR. MALONEY: Is that a good copy?

THE COURT: Better than some I have had.

MR. MALONEY: Let me give you this one. This is a better one. It would be easier.



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gpl Jones-direct

T4 Q Mr. Jones, can you tell us what Defendant's Exhibit BE for identification is.

A It is the balance sheet and accounts of International Scientific (1970) Ltd. for the year to 31 March, 1971, together with a statement of profit and loss for the measuring year ended 31 March, 1971.

Q What was International Scientific (1970) Ltd.?

A This was the successor company to International Scientific, Ltd.

Q In connection with the preparation of Defendant's Exhibit BE for identification, were you requested to prepare that statement in connection with the provisions contained in paragraph 6 of the agreement between Plessey and ISL, Plaintiff's Exhibit 3? I believe it starts on page 7.

A Yes, we were.

Q In preparing Defendant's Exhibit BE for identification, did you use you use your best efforts to prepare that statement in accordance with the provisions set forth in paragraph 6 of the agreement?

A We did.

MR. MALONEY: I will offer it in evidence.

MR. McCONNELL: Your Honor, we object again.

THE COURT: I think I will receive it.



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gp2 Jones-direct

MR. McCONNELL: Your Honor, this includes 10 months' operation by Plessey.

THE COURT: That's right.

MR. McCONNELL: My point is --

THE COURT: This statement is made for the measuring year by Price, Waterhouse; is that what it is?

THE WITNESS: Yes, sir.

THE COURT: All right, I will receive it.

xx (Defendant's Exhibit BE received in evidence.)

MR. MALONEY: Your Honor, may I read the auditor's report?

THE COURT: Where is that?

MR. MALONEY: It is just the first page, the one-page report stating what the document is.

THE COURT: All right.

MR. MALONEY: This is a copy of the balance sheet and accounts 31 March, 1971, and statement of loss for the measuring year ended 31 March, 1971, prepared by Price, Waterhouse & Company, chartered accountants, Barbados. Their report, apppearing on their letter-head, is dated August 16, 1971.

"Auditor's report to the members of International Scientific (1970) Ltd.



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"We have examined the balance sheet as at 31 March, 1971, the accounts for the year then ended and the statement of loss for the measuring year ended 31 March, 1971, and have obtained all the information and explanations we have required.

"In our opinion, according to the best of our information and the explanations given to us, and as shown by the books of the company:

"1. The balance sheet and the notes thereto are properly drawn up so as to exhibit a true and correct view of the state of the company's affairs as at 31 March, 1971.

"2. The profit and loss account presents fairly the loss for the year then ended and,

"3. The statement of loss presents fairly the loss for the measuring year ended 31 March, 1971, in accordance with the terms of the agreement dated 4 February, 1970, and the modifications thereto dated February 18, 1970, and 2nd March, 1970."

THE COURT: Did you prepare the certificate?

THE WITNESS: Yes.

THE COURT: What did you mean when you said "in accordance with the terms of the agreement and the amendment"? Whatdoes all that mean?



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gp4 Jones-direct

THE WITNESS: There are certain provisions in paragraph 6 of the agreement which we had to observe had been carried out in the accounts.

2 THE COURT: What provisions were those? Have you got the agreement?

THE WITNESS: Yes.

MR. MALONEY: Yes, sir. Maybe we should read those.

THE COURT: I would just like the witness to tell us what he had in mind; what he was referring to.

THE WITNESS: The first point which we had in mind is in paragraph 6 on page 7-A in that the profits should be computed in accordance with generally accepted accounting principles applied consistently with those applied by ISL in the past.

THE COURT: All right.

Q Did you do that, Mr. Jones?

A We did.

THE COURT: So instead of saying that in your certificate, you just said it was in accordance with the terms of the agreement?

THE WITNESS: That's right.

THE COURT: But it is the same thing?

THE WITNESS: Yes.



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THE COURT: Is there anything else?

THE WITNESS: Yes.

MR. MALONEY: There is a series of A, B -- through G. Perhaps we should go through all of them.

THE COURT: No. I just asked the witness what else he had in mind when he said "in accordance with the terms of the agreement."

THE WITNESS: We had in mind the various clauses which were in paragraph 6 and we tested to insure, as far as we could, that those terms had been complied with in the preparation of the financial statements.

THE COURT: Which clauses are those?

THE WITNESS: Clause 6-A.

THE COURT: What does that say?

THE WITNESS: "There should be no writedown or charges to profits resulting from facts established to have occurred during the years prior to the measuring year.

"B. No charge shall be made to profit for any expense of Plessey, such as managerial services or additional or new accounting systems, or any other services furnished or proposed to be furnished to ISL by Plessey, which would not have been sustained by ISL had ISL continued the business during the measuring year unless ISL management agrees that any such charge for services shall



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be made to ISL.

"C. Depreciation shall be charged on the same basis as charged heretofore by ISL, utilizing the same useful lives and rates.

"D. The cost of all research and development, training and engineering, instituted by ISL management during the measuring year will be charged against profit as such costs are incurred.

"E. Any sale generated by Plessey or made by ISL to Plessey shall be at the same price as charged by ISL to other customers, except there shall be deducted 8 per cent Barbados f.o.b.prices for all sales generated by or made to Plessey for which no commission is to be paid to a sales representative.

"F. No charge shall be made against gross income for the cost of the funds made available to the business under paragraph 5-A."

THE COURT: That referred to $600,000?

THE WITNESS: That's right.

THE COURT: Okay. Those were the things you had in mind when you made your certificate?

THE WITNESS: Yes.

THE COURT: All right.



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BY MR. MALONEY:

Q Turning to the liability section of the balance sheet of the measuring year statement, Defendant's Exhibit BE. Under current liabilities is an intercompany account in the amount of $1,928,037.

Could you explain to his Honor and to the jury what that account represents?

A That represents $850 injection of funds and something in excess of $1,000,000 which was paid out for purchase of inventory supplies.

Q Those would be amounts that were paid out by some other Plessey company on behalf of ISL which had not yet been repaid by ISL; is that correct?

A That is right.

Q Turning to the profit and loss account for the measuring year ended March 31, 1971, I see a deficit at the end of the year, $959,084. Could you explain to his Honor and to the jury what that figure represents?

A Basically that is the net result of trading operations for the measuring year, the excess of the expenses over the revenue of the company.

Q That would mean that the company on sales --

THE COURT: Is that what it means? You have a figure loss for the year and then you added the deficit



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at the beginning of the year, didn't you?

Q I'm sorry, I read the wrong figure.

A That should be $892,000.

THE COURT: You found a loss of 892 and then you added the deficit at the beginning of the measuring year to bring out this other figure, so that the loss you show here is 892?

THE WITNESS: 892,000.

THE COURT: All right.

Q That would represent the amount lost by the company on sales of $1,335,000; is that correct?

A Yes.

Q Turning to the next page, it says, "Statement of loss for the measuring year ended March 31, 1971."

Would you explain to his Honor and the jury what the purpose of this page is?

A To do that we have to refer back to the profit and loss of the company as a whole for the year to the 31st of March, 1971, which is an unadjusted profit and loss account, that is,none of the adjustments which we felt were to be under the terms of the agreement as shown in the basic profit and loss account.

Q So the 892,000 represents the total loss before any items are excluded which should not have been charged



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to ISL under the agreement of February 4, 1970?

A That's right.

Q That is the purpose of the next page, I take it?

A It is to reflect the adjustments which should be made in accordance with the terms of the agreement.

Q What was the loss for the year after excluding all items which should not have been charged to ISL during the measuring year?

A 642,773.

Q Would you explain to his Honor and to the jury what were the items which were adjusted for purposes of the agreement between Plessey and ISL?

A By that you want me to read them out?

Q Yes. Just explain each of the items.

A These were basically charges made by other Plessey companies which, under the terms of the agreement, had to be excluded. Therefore, we have taken out a charge for management services, traveling expenses of Plessey personnel and company administration charges made by Plessey group companies, which totaled $269,650.

Q Taking the large figure of $222,451, do you know what that charge represented?

A Those were charges made by Plessey Company at



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Farmingdale, I believe.

Q Do you know what they were for, those charges?

A Company administration.

Q Are any charges reflected on this statement for the office which was maintained in Maynard, Massachusetts?

A On the adjusted statement?

Q Yes.

A No, sir.

Q Do one of these adjustments include those expenses for the Maynard operation?

A The $222,000 I believe was the adjustment for the Maynard installation.

Q So the expenses of that operation are not included in the loss of $642,000 for the year?

A No, sir.

MR. MALONEY: Mark this the next number.

xx (Defendant's Exhibit DU marked for identification.)

Q Mr. Jones, could you explain to his Honor and to the jury what Defendant's Exhibit DU for identification represents?

A I don't appear to have DU.

Q Didnt I give you the exhibit? I'm sorry.



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THE COURT: You gave it to me.

A Yes. These schedules are the information requested in interrogatories.

Q Do you recall, were these schedules prepared by yourself, sir?

A Yes.

Q What do these schedules represent?

A They represent the breakdown of items which appear as lump-sum figures in the measuring year accounts.

Q Where did you obtain the figures which are included on the schedule?

A From the working papers of our files.

THE COURT: These are the work sheets that were used in preparing this Exhibit BE?

THE WITNESS: That's right.

MR. MALONEY: I believe what these were, the plaintiff requested a breakdown of the specific items adding up to the figures appearing on the measuring year statement, Defendant's Exhibit BE for identification, so what Mr. Jones did was, taking his work papers he prepared the schedules which have been marked as Defendant's Exhibit DU, breaking down those items, and this information was supplied to the plaintiff in response to the interrogatories.

MR. McCONNELL: No, it was not, your Honor.



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MR. MALONEY: Not in this form, but the information contained in the schedules was supplied in the response to interrogatories.

MR. McCONNELL: Well, your Honor --

THE COURT: He has got it now.

MR. McCONNELL: I got it now for the first time. It is not a list of documents.

Mr. Maloney has had it since October 13.

THE COURT: I am not going to receive it, if that's what you are worrying about.

MR. MALONEY: I offer it in evidence.

THE COURT: I won't receive it in evidence now. You have identified it. When you got the lawyer's letter, these were the work sheets that you prepared at the time you prepared the balance sheet and the profit and loss statement?

THE WITNESS: They were in our working papers.

THE COURT: They were in your working papers. They just came out of your file?

THE WITNESS: Yes,sir.

MR. MALONEY: Your Honor, do I understand that they will be received subject to Mr. McConnell preparing the information he received in the interrogatories?

THE COURT: I don't know why we need to receive



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them at all. I think they speak for themselves, but if any of you fellows want to comment on that.

(To the witness) This is the thing you certified, isn't that correct?

THE WITNESS: Yes.

THE COURT: All these things were your work sheets which came out when you made out those figures?

THE WITNESS: Yes.

THE COURT: All right.

MR. MALONEY: I have no further questions.

THE COURT: We will take a recess.

(Recess.)

THE COURT: Proceed, Mr. McConnell.



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CROSS EXAMINATION

BY MR. McCONNELL:

Q Mr. Jones, have you got all these exhibits before you there?

A I think so, sir, yes.

Q Can you fix the date when Price, Waterhouse was asked to make a comparison of the Hourihan statement and your 1969 statement?

A I think it was in fairly late 1972.

Q Who made that request?

A Mr. Dubin.

Q Do you know who Mr. Dubin is?

A He is an attorney.

Q For Plessey?

A Yes.

Q When did you sign-off on your 1969 statement?

A 21 June, 1971.

Q What was the reason for not completing the audit until a year and a half after the end of calendar year 1969?

A I can't recall the exact reasons for the length of the delay.

Q Well, I believe you testified that Mr. Hourihan had requested this audit. Do you recall when that request



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was made?

A That was made in -- I think it might have been summer or autumn of 1970.

Q Can you explain why it took you until June 21, 1971, then, to complete this audit?

A No, sir, I can't at the moment recall why the length of the delay took place.

Q Do you recall that Plessey, after Hourihan's initial request, asked you to discontinue making an audit for '69?

A No, I can't recall that.

Q Were you called off the job and then later asked to make this audit?

THE COURT: Do you recall?

Q Do you recall?

A Do I recall?

THE COURT: Do you recall ever being told to stop doing this and then they came back and told you to go back and go at it again?

THE WITNESS: No. In fact, as far as 1969 was concerned, we initially resigned after doing the 1968 accounts and we were then asked to reconsider our decision by Mr. Hourihan and do the 1969 accounts for International Scientific.



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Q You fix that as some time in the summer or fall of 1970?

A I think so.

Q How long normally does it take you to make an audit of a company like this?

A That would depend upon whether any problems arose which were takinga lot of time to resolve.

Q How long were you in the process of making this audit? Let me put it that way.

THE COURT: This is the comparison you are asking about, the comparison of the two statements?

MR. McCONNELL: No. I am asking him now about their audited statement for the year ending December 31, 1969 --

THE COURT: Okay.

MR. McCONNELL: Which shows a sign-off date of June 21, 1971.

THE COURT: All right.

Q Now, as to that audit, timewise, how long did it take you to make it?

A I don't think I can answer that question. I don't know how long it took us, actually, Mr. McConnell, because there may have been points which were outstanding which took a long time to resolve after we had virtually



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finished the detailed field work.

Q Did you do the field work?

A No, sir.

Q Who did?

A One of my seniors under the supervision of a manager.

Q Was that Mr. Walker?

A Mr. Walker was the manager.

Q So it was somebody under Walker that did the field work?

A Yes.

Q All I am trying to get at is to the best of your recollection, whether Price,Waterhouse was in the process of making this audit from the summer or fall of 1970 until June of 1971.

A Not continuously, no.

Q I take it you don't have any knowledge as to the dates that this gentleman under Walker was actually out at the plant?

A No. I would have to check time records in my office for that.

THE COURT: Do you know who the gentleman was?

THE WITNESS: Mr. Ellis.

THE COURT: Mr. Ellis?



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THE WITNESS: Yes.

Q Do you know whether Mr. Hourihan was still there when this audit was being conducted?

A I think he was there at the start of the audit, but I am not sure he was there when the audit was completed. I don't think he was there at the end.

Q Do you know who at Plessey-ISL assisted Mr. Ellis when he was making this audit?

A Mr. Finty.

Q Do I understand that initially you just prepared the audit for the year 1969 with no comparison between your audit and Mr. Hourihan's warranted statement?

A Yes. We carried out a straightforward audit for the year to 31 December, 1969.

Q Subsequently Mr. Dubin requested you to make this further comparison between your audit and between Hourihan's; is that it?

A That's true.

Q What's the exhibit number on that comparison, BG?

A BG, yes.

Q Okay. You come up with a difference of 113,000 between the warranted statement of Hourihan and your audit report; is that it?



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A Yes, sir.

Q As I understand it, you account for that principally by the overstatement of inventory and the understatement of payable; is that it?

A That's right.

Q The principal inventory item was a miscount of cores?

A Yes, sir.

Q Hourihan had recorded 13,000,000 and your audit disclosed that it was actually 1,300,000?

A Yes.

Q Is that right?

A Yes.

Q Do you know physically how much space these 1 million 3 of cores would occupy?

A I couldn't be sure, but it wouldn't be a very large space.

Q They could all fit in a test tube or a small jar, isn't that right?

THE COURT: You are talking about 1,300,000 cores?

MR. McCONNELL: Yes, or even 13,000,000. They can fit in there, too, your Honor.

A It would fit in a very small space as far as I



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can recollect, yes.

Q When you make an inventory count of these cores, you don't physically count them, do you?

A No, sir.

Q What?

A No.

Q There is a label on the jar or the bottle or the test tube, isn't that right?

A That's right.

Q You simply read off that label?

A Yes.

Q What happened here was simply that somebody read 13,000,000 rather than 1 million 3; isn't that right?

A I would imagine so.

Q Did one of your people, one of your Price, Waterhouse people participate in the ISL inventory count back in December and January of 1969-70?

A Yes.

Q So he would have been along when --

THE COURT: Well, he has testified. Let's not go over it.

MR. McCONNELL: All right, I agree.

Q Now, you also -- I am going to come back to the cores, but you also mentioned that there was a double count



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of inventory, and that was counting both materials that were in stores, or storage, and also in work in progress; is that right?

A That is the effect, but may I amplify that for you?

Q Sure, go ahead.

A In the preparing of the inventory of materials which are already in work in progress, a listing is made of those materials. It so happened that the listing of materials in work in progress was inadvertently included also in the raw material listing.

Q Do you know how that happened?

A No, I don't.

Q But again, your Price, Waterhouse man was in on this inventory count?

A Yes.

Q Now, going to the 13,000,000 cores, or 1.3 million cores actual, in Mr. Hourihan's warranted statement, does he have a footnote with reference to those cores?

A Yes, he does.

Q What is that footnote?

A It's Footnote 4-B. Do you want me to read it?

Q I may, but let me look at it, too.

A Okay.



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Q Mr. Hourihan shows, doeshe not, in that footnote that he valued the cores at $500 per thousand and extending that figure by the 13,000,000 of cores, that's how he got the 65,000 for the cores; is that right?

A I would think that is right, yes.

Q And the decrease that you show of 58,500 is the difference between the value of the 13,000,000 of cores at that same rate and 1 million 3 of cores?

A Yes. I think so.

Q But doesn't -- $5 per thousand rather than $500.

THE COURT: I was wondering about that.

Q All right, it was the difference between the 13,000,000 at $5 a thousand and 1.3 million of cores that accounts for this figure?

A Yes.

Q Now, doesn't Mr. Hourihan indicate in his note as to these cores that although he valued them at $5 per thousand, that their value is doubtful and that the cost may not be recovered?

A He does.

Q Let's go to thepayables. You say that the payables were understated by 32,000, right?

A Yes.

Q Which is to say what, Mr. Jones?



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A That the accounts had not included certain liabilities were found during our audit testing.

Q Do you know when that audit testing was done?

A I can't tell specific dates, no.

Q So it would have been done some time, I take it, between summer or fall of 1970 and the time you signed off in June of 1971?

A That's right.

Q These are liabilities that on your audit turned up, but which were not reported on Mr. Hourihan's warranted statement?

A That is correct.

Q But as a result of your audit did you also determine that there were liabilities included of approximately $54,000 in Hourihan's statement which later turned out to be non-existent?

A Not at that point in time, sir. At that time of sign-off the liabilities had not been clearly determined as no longer being liabilities of the company.

Q As at the time of sign-off of your report?

A That's right.

Q For the year 1969?

A Yes.

Q And that was in June of 1971?



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A Yes.

Q But when you compared this comparison for Mr. Dubin, you had since learned that there were included under liabilities of the company, on Hourihan's warranted statement, 54,000 of liabilities which later proved to be non-existent?

A And also in the audited accounts at the 31 December, 1969, as well. So, the liabilities are in both sets of liabilities.

Q Well, isn't the net of this that actually approximately 20,000 of liabilities -- 20,000 more of liabilities were reported than actually existed?

MR. MALONEY: I object to the form of that question, your Honor. I don't know --

THE COURT: I will sustain the objection. I don't understand the question.

MR. MALONEY: I think if Mr. Jones is given the opportunity he can explain it very clearly.

MR. McCONNELL: You didn't let me ask my question so --

THE COURT: Please, gentlemen.

MR. McCONNELL: All right, let me try again, your Honor.



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T5 Q You show on Hourihan's statement there were $32,000 of liabilities not reported.

A Yes.

Q You later find that on Hourihan's statement there are $54,000 of liabilities reported which prove to be non-existent?

A Yes.

Q Now, taking both those facts, isn't the net of those two errors that Hourihan actually overstated liabilities by $20,000?

A Yes.

Q So this was a net error of $20,000 in favor of Plessey?

THE COURT: Well, I don't know about it being in favor of Plessey.

MR. MALONEY: I think the witness also testified that there is a third fact.

THE COURT: Let's not get into a discussion. You will get a chance to ask him more questions. He is asking you whether the net result of those two things is that Hourihan overstated the liabilities by $20,000.

THE WITNESS: That is true.

Q If we add the $65,000 of doubtful inventory and the $20,000 over overstatement of liabilities, giving



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us $85,000, doesn't that pretty well wipe out --

MR. MALONEY: I object to that.

THE COURT: I sustain the objection to that question.

Q How were the $54,000 of non-existent liabilities determined?

A Do you mean how did we subsequently find out they didn't exist?

Q Yes.

A These liabilities were due ostensibly to a company called Intersel, which was based in the United States, and from information supplied by Intersel these liabilities were picked up in the Barbados records. I can't recall the exact date at which the work took place in the United States, but I believe that a CPA was employed here to go into the records of Intersel and after a considerable period of time we were able to obtain from him a statement that to the best of his knowledge these liabilities didn't exist, as no one was seeking payment in that point of time.

Q Well, as a result of that investigation did you find out what happened with Intersel is that--

THE COURT: Well, ask him if he did find out what happened.

b2

Q Was there an explanation given to you by Intersel

as to --

THE COURT: This makes heavy water. If you want to ask him what the CPA found in the Intersel records --

THE WITNESS: Your Honor, he didn't. He indicated from the work he had done these liabilities were not existent.

Q And that is who that is reporting this?

A The CPA. I think his name is Mr. Block.

Q I believe you said that one of your Price Waterhouse people was on the inventory team in December of 1969 and January of 1970. Does that refresh your recollection that Hourihan requested Price, Waterhouse to make an audit for the year '69?

A Yes.

Q In December?

A It was in 1969 that we had the request to reconsider our decision to carry out an audit.

Q Pursuant to that request your people were participating in this inventory?

A It is a general practice of ours to observe inventory.

Q Do you know who the gentleman was who did participate on that check?

A No, I can't remember the specific individual.



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Q Let's go to the statement for the measuring year. This statement reflects ten months of operation by Plessey management, is that not correct?

THE COURT: I am still bothered about this, as to whether he knows it. He made an audit for the measuring year and he is familiar with the contract, and I don't think you have to go through all this. There is plenty of evidence as to when Plessey took over.

Q Who at Plessey advised you as to what expenses to deduct?

THE COURT: This fellow said he made an audit. If you want to ask him how he made the audit, you can ask him that. But I understand an auditor is supposed to be an independent fellow who goes in and checks the books and either confirms them or finds they are wrong.

THE WITNESS: That is basically right.

MR. McCONNELL: He did that for the books at Barbados.

THE COURT: Ask him what he did. I think you are laboring along.

Q There is an item here for company administration of $222,451.

THE COURT: What is that?

MR. McCONNELL: That is the deduct item, note 4.



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THE COURT: Do you see that?

THE WITNESS: I see it.

Q Where did you get the figure?

A That was the figure shown by the company administration account in the general ledger.

Q But now did you go back to the figure shown on the general ledger?

A Yes, we did.

Q What items did you check?

A I can't tell you the detail items we checked. We have gone back to the supporting evidence underlying the account.

Q I believe you testified in answer to Mr. Maloney's question that you thought this represented the expenses for the Boston or Maynard operation.

MR. MALONEY: I object. He said the $122,000 figure referred to that.

MR. McCONNELL: That is what I asked him about.

MR. MALONEY: I thought you asked him about the $140,000 figure.

THE COURT: Let's move along. What figure do you want to ask me about?

MR. McCONNELL: $22,451.

Q Was it your testimony, Mr. Jones, that that

represented the expenses in connection with the Boston operation?

A I believe I said I thought it was the expenses in connection with the Boston operation, but I also just said that I didn't do the detail work myself, so that I

b3 can't tell you what detail is in that company administration.

Q That's what I am trying to get at, whether this was simply a figure--

THE COURT: We are just wasting time. I think he answered it three times, that somebody else did it.

Q Under expenses you show an item for commissions of $92,584.

A That is right.

Q Do you know whether that represented commissions actually paid or accrued?

A Those are commissions accrued, in other words, commissions payable.

Q Do you know whether that represented the full amount to which the sales representatives would have been entitled?

A Our tests indicated that that was in accordance with the terms of commissions due to the representatives.

(Pause.)

THE COURT: That is why at the recess I gave you

some time. I don't like these long delays.

MR. McCONNELL: I am sorry, your Honor.

Q I show you what was marked as Defendant's Exhibit DU for identification. I am not clear. Were these the working papers or were they schedules?

THE COURT: We have been all through this. He testified these were working papers prepared at the time.

MR. McCONNELL: I think he is mistaken.

THE COURT: He has testified to that.

MR. MALONEY: I don't think the witness testified these are the working papers. These are schedules that were prepared by translating the numbers from the working papers onto these schedules.

THE COURT: I asked him specifically whether they were working papers and he said they were.

MR. MALONEY: I believe the witness has the working papers.

THE COURT: Didn't you tell me these were working papers?

THE WITNESS: Yes, sir.

THE COURT: That is what I thought. Why do you fellows keep arguing these things?

MR. McCONNELL: That is all I have, your Honor.

THE COURT: Any other questions?

MR. MALONEY: Yes, your Honor.

REDIRECT EXAMINATION

BY MR. MALONEY:

Q Going back to the 1969 statement and the comparison, Mr. Jones, with Mr. Hourihan's statement, in preparing the comparison which is under cover of a letter dated December 5, 1972, Defendant's Exhibit BG, in which you compared your audited statement for '69, which is BC, and Mr. Hourihan's warranted statement, Defendant's Exhibit AS, you did not incorporate any later information in the comparison than what was contained in the audited statement and the warranted statement?

A No, that is directly from the accounts, from both sets of accounts.

Q So this is just a mathematical comparison which does not take account of any information obtained at a later date, except with respect to this $54,000 item, which was investigated by Mr. Block?

A It does not. The $54,000 item has no effect on these figures at all. These are straight extractions from two sets of accounts.

Q Now, taking the $54,494 of non-existent liabilities, do you know whether or not Mr. Hourihan had included those liabilities in the accounts payable and accrued expenses



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of $403,109?

A Yes.

Q He did include them?

A He did include them.

Q And you included them in the $436,000? Is that correct?

A We did.

Q So if they were included in both figures, would they be reflected at all in the difference of $33,822?

A Not if those figures were amended. They would make no difference at all to it.

Q Because you would subtract the $54,000 both from Mr. Hourihan's warranted statement and from your audited statement and you would end up with the same difference, the $33,822?

A That is correct.

Q And, therefore, that would have no effect on the difference of $113,300?

A No.

THE COURT: You don't need repeat it.

Q There was one thing I was a little confused about in connection with Mr. Hourihan's requests for the preparation of a 1969 audit. I believe you testified that at some time after the audited statement for 1968 had



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been prepared, Price Waterhouse resigned as the auditors for ISL?

A That is right.

Q Do yourecall when Mr. Hourihan requested you to reconsider that decision and become the auditors for the 1969 statement?

A I think it was around about September, 1969.

Q September, 1969?

A I think so.

Q Do you recall what Mr. Hourihan told you at that time in connection with his request?

A He said the company had become a wholly owned subsidiary of Data 100 and that the various points which we had been discussing in the 1968 accounts would be resolved thereafter.

Q What was the reason for your resignation?

A Basically we experienced difficulty in getting full cooperation from senior personnel of the company and we felt our position would be untenable if it continued that way.

Q Now, when Mr. Hourihan asked you to reconsider your decision in September, 1969, do you recall whether or not you agreed to become the auditors for the company again?



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A We did agree.

Q Would you explain to his Honor and the jury your responsibility as a partner of Price Waterhouse in connection with the supervision of the account?

THE COURT: I don't remember anything about this on cross-examination, and I think the testimony is perfectly clear on this. I don't think we need to go into that.

MR. MALONEY: May I be heard for a moment?

THE COURT: No. He has told us what he did. I don't think it adds anything to it. Nothing came up on cross-examination that I can recall that related to it.

MR. MALONEY: I believe the questioning on cross-examination would tend to show that Mr. Jones may not have been familiar with the tests and procedures carried out.

b4 THE COURT: No, I don't think so at all.

Q One final question. I believe Mr. McConnell asked youa question concerning the item for commissions appearing on the profit and loss statement in the measuring year statement, Defendant's Exhibit BE.

A That is right.

Q To your knowledge was that figure calculated in accordance with principles consistent with the principles used in calculating commissions on the audited statements for prior years?

A Yes, sir.

MR. MALONEY: Thank you, your Honor. I have no further questions.

RECROSS EXAMINATION

BY MR. McCONNELLL:

Q The $54,000 of non-existent liabilities would however affect the deficit net worth shown for the year 1969? Isn't that right?

A Not necessarily, sir.

Q What do you mean by not necessarily?

A Because the exact date when those liabilities were incurred and where they were charged off in the accounts and which accounts, '68, '67, or '69, any of those could be affected on the reversal and not just 1969 alone.

Q Well, assuming they were incurred in 1969, it would reduce the 1969 deficit net worth by $54,000? Isn't that right?

A On that assumption, yes.

MR. MALONEY: I have no further questions.

THE COURT: Thank you very much. You are excused.

(Witness excused.)

MR. MALONEY: The defendant calls Seth Dubin.

S E T H D U B I N, a witness called on behalf of

the defendant, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. MALONEY:

Q Mr. Dubin, will you state your full name and address for the record?

A Seth H. Dubin, 875 Park Avenue in New York City.

Q Tell his Honor and the jury your educational and professionalbackground and experience.

A My educational background is Bronx High School of Science, Amherst College, Harvard Law School. I was admitted to the bar in 1957. I have practiced law ever since then, first in the Justice Department and then privately.

Q You are currently with what law firm?

A I am apartner of the firm of Sinsheimer, Sinsheimer & Dubin.

Q Is Mr. Warren J. Sinsheimer a partner in that firm?

A He is.

Q In connection with the acquisition of ISL by Plessey Incorporated in 1970 did your firm represent Plessey Incorporated?

A Yes.



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Q Were you personally involved in the preparation of the acquisition agreement and the various drafts thereof?

A Yes.

Q Mr. Dubin, I show you Plaintiff's Exhibits 1 and 2 in evidence and I ask you if you can identify those two documents.

A Yes. One is the first draft, and 2 is the second draft.

Q Could you just look through there and see if you can identify the handwriting which appears on those two drafts?

THE COURT: Before you get to that, who wrote those drafts? Did you write them, Mr. Dubin?

THE WITNESS: Yes.

THE COURT: Go ahead.

THE WITNESS: Oh, I think except for the date that was put in at the beginning of the second draft, I think all the other handwriting that is on here is mine.

Q The first date on the second draft? What would that be you arereferring to?

A The 4th day of February was inserted, it was not typed.

Q That is on the second draft?

A Yes.



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Q I show you a copy of Plaintiff's Exhibit 3 in evidence and ask you if you can identify that document.

A Yes, this is the agreement that was the final full agreement, except for the changes that were made subsequently at closing, and one or two changes along the way between this document and the closing, but this is the principal agreement.

Q Do you recall that at some time between the first draft and the second draft of the contract a discussion arose as to who would have management control of the business during the measuring year?

A Yes.

Q What was the measuring year?

A The measuring year was the year starting with the beginning of the month after closing.

Q Do you recall what the nature of the dispute was between Plessey and ISL with respect to who would manage the business?

A ISL said that they felt they should manage the business, since the amount of money that they might be receiving for their business was dependent upon the success of the business, and, therefore, they thought they should be able to run it.

Q Do you have any recollection of who it was who



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worked out the language that was to be included in the contract?

A Well, Julius Lewis, who was representing ISL, and I, representing Plessey, were the principal communication point between the two parties.

Q I show you Defendant's Exhibits B and P in evidence and ask you if you can identify those documents.

A P is a telex that I sent off to Warren Sinsheimer. I was in New York; he was in London. And B, I guess this is, was his answer back to me.

Q Who had proposed the language which you sent to Mr. Sinsheimer in the telex?

A Mr. Lewis.

Q I take the second telex from Mr. Sinsheimer was the language which he preferred to have inserted in the agreement?

A That is right.

Q Did you have any discussions with Mr. Sinsheimer concerning the language contained in this telex?

A I can't recall whether I had any conversation with him after I got the telex. I am not dead sure. But my recollection is before I sent my telex off to him I had a conversation with him.

Q Referring to the third sentence of proposed



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paragraph 5D in Mr. Sinsheimer's telex, "Notwithstanding the foregoing if ISL profits --"

A Wait just a moment. I see K.

Q Next to the last sentence, I believe that is "B".

A Yes.

Q "Notwithstanding the foregoing if ISL profits run at less $15 K dollars per month in each of ten full months commencing with the third calendar month of the measuring year, this subparagraph shall no longer apply and Plessey shall have the right to assume full management responsibility."

What was your understanding of the intention of that provision?

A The intention of that provision was that ISL had to make $15,000 in each and every month starting with the third month of the measuring year. If it didn't in any month, if it didn't make at least $15,000, Plessey then had the right to come in and take over the management.

Q Now, referring to the last sentence of the two telexes, I believe it has been established in prior testimony that Mr. Sinsheimer did not include the language concerning maximizing profits which Mr. Lewis included in his proposed language.

Do you recall any discussion with Mr. Sinsheimer of the reason why he had deleted the language concerning maximization of profits from the last sentence in his proposed provision?

b5

A I think that is one of the things we talked about in a conversation before the telexes went back and forth. I gave Warren a rough picture of what it was that Julius Lewis was asking for. I think we felt that the notion of maximizing profits was something more than we, in any event, should be obligated to, that we should have an obligation to use good faith in continuing the business and to run it reasonably, but maximizing was something that seemed to us not to be a normal business proposition, it was something beyond that.

Q What is your understanding of the good faith obligation that is required in every contract?

A In every or in this?

Q In this contract.

A My understanding of that was that Plessey had an obligation to this Barbadian company similar to the obligation that it had to any other Plessey company, that it has an obligation to permit this company to succeed, to give it the opportunity to succeed, but I didn't feel that it had an obligation to do extraordinary things at Plessey's



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expense so that this company could show more profits than it normally would have. But I think it did have an obligation to work hard and give it every opportunity to succeed, to be profitable.

Q Now, after you received Mr. Sinsheimer's telex did you incorporate that provision in a second draft of the agreement?

A Yes.

Q Referring once again to Mr. Sinsheimer's telex, I believe there are certain handwritten changes made in the language that was typed on the telex. Can you identify that handwriting?

A That is mine also.

rgh 1 Dubin-direct

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Q The provision which you incorporate in the second draft, Plaintiff's Exhibit D, would that include the typed language as amended by your handwritten changes; is that right?

A That's right.

Q That's correct?

A Yes.

Q Do you recall when you sent the second draft to Mr. Lewis?

A No, I can't -- well, if there was a date -- I would only be inferring from the date of the telexes. I'm sure a second draft must have gone out to Mr. Lewis within a day or so after I received Warren Sinsheimer's telex.

Q Thereafter did you have further discussions with Mr. Lewis concerning further changes in the language of the next to last sentence of paragraph 5D?

A Yes.

Q Was it a face to face meeting or did you speak to him on the telephone?

A I don't think it was face to face. I think it was all on the phone.

Q Can you give us your recollection what he said to you and what you said to him?



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A The provision that Warren had drafted required ISL, if it was to continue with its old management, to make $15,000 each and every month. Julius said that he felt that was unfair; that down along through the year after having done well in a series of months there might be a period when for one reason or another he would not do well in one month. He felt it was unfair not to take account of those prior months if in a subsequent month there was a dip. I thought that was a fairly reasonable point and I told Warren that was a fairly reasonable position for Julius to take.

Q Do you recall any discussion in this telephone conversation with Mr. Lewis as to whether or not that change would have any effect upon the first month in which the company had to make $15,000?

A No. I don't remember any discussion of that sort, no.

Q Do you recall any discussion in which Mr. Lewis indicated that the company should be given the third and fourth months of the year to average $15,000?

A No.

Q So at the time you finished your telephone conversation with Mr. Lewis, it was still your understanding that the company would be required to achieve a $15,000



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profit in the third month of the measuring year?

A Right.

Q Referring to Plaintiff's Exhibit 2, the second draft, paragraph 5D, I believe there are certain handwritten changes made on the next to the last sentence. Could you identify those handwritten changes?

A It's my handwriting.

Q Do you recall the occasion for you making those handwritten changes on that document?

A Oh, I think those handwritten changes would have been made probably while I was on the telephone with Julius. We would talk through some of the provisions and I would make notes on to my working copy in preparation for the next draft.

Q Referring to Plaintiff's Exhibit 3 in evidence, the February 4th agreement, if you would turn to paragraph 5D.

A Okay.

Q Was the provision from the second draft with your handwritten changes made at the time of your telephone conversation with Mr. Lewis, incorporated in the agreement signed on February 4, 1970?

A Yes. I would have to go through it to see if it's word for word. I think it is.

Q Did there come a time when you and Mr. Lewis had further discussions that that language did not accurately reflect your discussion on the telephone?

A Yes.

Q I show you a copy of Plaintiff's Exhibit 4 in evidence, which is Mr. Lewis' letter to you dated February 18, 1970, and i ask you what the purpose of that letter was.

A The purpose of this letter -- there were two purposes to the letter. First, to have it in some formalized way that Plessey Incorporated rather than Plessey Limited was going to be the purchaser, but then secondly to clear up the mistake that had been made in the language in paragraph 5D where some negatives went in where they shouldn't have been or didn't go in where they should have been, I have forgotten, but in any case, as they got into the agreement it was kind of backwards and we straightened that out.

Q And that would be paragraph 2 of Plaintiff's Exhibit 4 was the straightening out of the language of paragraph 5D?

A That's right.

Q Now, between the date of the telephone conversation with Mr. Lewis at which time you made the handwritten change



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on the second draft of the agreement and the time when you received Mr. Lewis' letter of February 18, 1970, do you recall any telephone conversations with him concerning paragraph 5D and the necessity to make the corrections?

A No. I think it must have been shortly before February 18th that either he or I, and I can't remember-- that either he or I realized that we had made a mistake in the February 4th agreement and we quickly then rectified it.

Q Did you discuss it on the telephone before Mr. Lewis drafted and sent the letter of February 18th, Plaintiff's Exhibit 4?

A I expect we did, yes.

Q During any telephone conversation that took place during that period, did Mr. Lewis request any further changes other than the correction of the typographical errors that appeared in the agreement signed on February 4th?

A No. You mean with respect to this paragraph 5D?

Q Right.

A No.

Q By the way, did Mr. Lewis ever, at any time, tell you that he thought that the language contained in the February 18th letter, Plaintiff's Exhibit 4, would allow the company three months to average $15,000 before Plessey



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could assume management control?

A No.

Q Do you have any recollection of discussing the various drafts ending up with the February 18th letter concerning paragraph 5D with Mr. Kovar?

A I am just not sure. Allan and I must have seen each other through that period. I know we did. I would be surprised if we hadn't talked about this, so I can't remember precisely that we did.

Q Do you recall any discussion with Mr. Kovar concerning the meaning of the next to the last sentence of paragraph 5D that was in any way inconsistent with your discussions with Mr. Lewis?

THE COURT: I will sustain the objection to that question.

(To the witness) All you really remember is you must have seen him during that period?

THE WITNESS: Yes.

THE COURT: I will sustain the objection on that last question.

Q Referring to paragraph I believe it's 6 of the second draft, Plaintiff's Exhibit 2. I believe there is a handwritten change there inserting some reference to cable harnesses and electronic subassemblies. Can you identify



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that as your handwriting, Mr. Dubin?

A Yes, that's mine.

Q Do you recall how it came about that you made that insertion in the second draft?

A Yes. I had -- I was-- this was, again, a conversation with Julius Lewis. He told me that either he or Mr. Kovar felt that the language that I had drafted wasn't clear enough for them. They, for some reason, felt that when I talked about assets -- well, without getting into this, I had drawn some language which I thought described ISL's entire business: memory planes, memory stacks and other things. I had known that there was some insignificant-- relatively insignificant business that ISL was into besides simply the memory planes and stacks business. I didn't know really what it was, but I tried to be all inclusive. Julius asked me whether I would include -- whether I would use the words also cable harness and other electical assemblies in the contract. I had no problem with that at all. I thought that I had covered that already in the language I had used, so we put those words in, too.

Q Prior to your preparation of the second draft, had Mr. Sinsheimer, or anyone else, told you not to include reference to cable harness in the contract?

A Oh, no.



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Q Do you recall any discussion prior to the second draft of cable harnesses at which you were present?

A No.

Q Referring to Plaintiff's Exhibit 3, the agreement signed on February 4th, and turning to paragraph 10E-1, which I believe appears on page 12. Paragraph 10 starts "ISL represents and warrants..." And then paragraph 10E-1 "Since December 31, 1969, there has not been..." I won't read this paragraph again since we have all heard it repeatedly.

What was your understanding of the intent of paragraph 10E-1 in the agreement?



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A The intent of it was that between December 31, 1969 -- no, let me put it around the other way. Come the time we were going to be closing, that one of the things they had to satisfy us of was that their operations during the year 1970, that is subsequent to December 31, 1969, had been with certain acceptable parameters that were set, and if their losses were more than those parameters, that they then could not make a representation that they had to complete the deal.

Q Assuming a March 2 closing date, what was your understanding of the maximum amount that ISL would be permitted to sustain as operating losses for the months of January and February under this provision?

A $40,000 altogether.

Q I noticed that in paragraph 10-E-1 it talks about other than changes in the ordinary course of business, the specific reference to the sale of property which was the residence of Mr. Kovar and the writing-off of certain test equipment. Do you have any recollection of either Mr. Kovar or Mr. Lewis ever requesting that you specifically exclude any other type of expense in making the calculation under paragraph 10-E-1?

A No. I don't recall. Could I take a look back at the second draft --



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Q Sure.

A -- and see if there was any other note there?

Q Sure.

A No.

Q Staying with the second draft for a moment, Mr. Dubin, I believe there is -- well, let me look at it before I waste time.

Referring to the second draft, Plaintiff's Exhibit 2, which says, "Operating losses not in excess of ..." and I see that in handwriting has been inserted, "operating losses not at a rate in excess of $10,000."

Can you identify that handwriting?

A Yes. That's mine also.

Q Over in the margin there is another handwritten note.

"Wants $20,000/month," and then below that is written "per month."

Do you have any recollection of what those handwritten notations refer to?

A Yes. Those were also the result of a conversation with Julius. I had provided, or I wanted to provide that the maximum that ISL could lose during a period at the beginning of 1970 until we closed was to be $10,000 and if they had lost more than $10,000, then we



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didn't have to complete the closing.

Q 10,000 a month is that?

A No. No, that's not the way I had drafted it. I had it simply $10,000. The inserts after the conversation with Julius were, first of all, to insert "at a rate," but then also to increase the number 10,000 up to 20,000. When I said in the margin "wants $20,000 a month," that was what Julius was asking for.

Q Did you agree to that?

A I didn't agree to it. I took it up -- did you mean did Plessey agree or did I?

Q Did Plessey agree to make that change?

A Yes.

Q Under the provision that you were requesting, $10,000, and assuming a March 2 closing date, how much money would ISL have been permitted to lose in the months of January and February?

A $10,000.

Q So Mr. Lewis requested a change in that provision that would allow them to lose up to $40,000 for the months of January and February; is that correct?

A Right.

Q And Plessey agreed to that?

A Yes.



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Q Following the letter of February 18, 1970, Plaintiff's Exhibit 4 in evidence, what's the next thing you recall in connection with the acquisition?

A There was one other letter -- I don't remember, though, whether it was before this one or after. I think it was after -- that set out some understandings between us as well.

THE COURT: This is before the date of the closing; is that right?

THE WITNESS: Yes, sir.

xx (Defendant's Exhibit DV marked for identification.)

Q Mr. Dubin, I show you Defendant's Exhibit DV for identification and I ask you if you can identify that letter?

A Yes. This is a letter from me to Julius and then Julius signed a copy of the letter showing he agreed to it and returned it to me.

Q That's dated February 4, 1970?

A Yes. I am way wrong. It's earlier. You are right. February 4.

Q But, in any event, that was the additional letter to which you just referred?

A That is right.



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Q Well, then, what is the next thing you recall in connection with the acquisition?

A I think the next thing, then, must have been simply getting on to the closing.

Q Do you recall when youwent down to Barbados?

A I went to Barbados, I believe, on Saturday -- it would have been the first Saturday of March, or the last Saturday of February -- no, I guess the first Saturday of March.

Q Prior to your leaving New York, did you have any discussion with either Mr. Sinsheimer or Mr. Albert concerning any amendments that would be requested to the contract at closing?

A No.

Q Did you participate in any discussion with Mr. Sinsheimer or Mr. Albert concerning the fact that the business might need 800,000 rather than 600,000?

A Before leaving New York?

Q Yes.

A No.

Q Do you recall any discussion with anyone concerning either amendments to the contract or the need for additional money before you left New York for Barbados?

A No.



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Q I believe you testified you arrived on Saturday. Do you recall how you spentSunday in Barbados?

A I think I spent Sunday looking at some papers along with Julius Lewis. We were gearing up to get the thing closed and closed quickly. I think we must have -- I think we must have looked at papers each of us had brought down.

Q Was there any discussion about amendments with Mr. Lewis at that time?

A No.

Q Was there any discussion for the need of cash in excess of $600,000 at that time?

A No.

Q Do you recall anything else about that Sunday that would be significant in connection with the closing of the acquisition?

A I think Milton Albert came on down on Sunday. No, I can't recall anything.

Q On what day did the closing actually take place?

A Well, it's hard to say when it was taking place. It was taking place over a two or three-day period. In a sense, I guess it started on Sunday and it was in to Monday and Tuesday. I think Tuesday was the end of that process.



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Q What is your recollection of how the subject of amendments to the contract came up?

A That came up because Milton, when he got down there, started getting into the numbers again, into the ISL results.

THE COURT: That's Milton Ablert?

THE WITNESS: Milton Albert.

A (Continuing) It was Milton's judgment after looking at the numbers, and also looking at the numbers that he, I suppose, was developing together with Mr. Hourihan, and also the numbers that Mr. Hourihan gave to him, that $600,000 wouldn't see the company through.

Q How about the operating results for the months of January and February, do you have any recollection of what those were?

A There were losses I think in both months. Certainly February was a very big loss. January was a little loss, as I recall.

Q Do you have any recollection of what the total loss was?

A The total loss, I think, was on the order of $75,000.

Q When Mr. Albert had learned this information, what happened next?



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A What happened next was -- you say when he learned it? I think it was kind of learned in bits and pieces, but when the information -- when you finally had the whole picture, what happened was to get on the phone and talk to Warren Sinsheimer about it.

THE COURT: I think we will take our luncheon break now. We will come back at 10 minutes to 2, ladies and gentlemen.

(Luncheon recess.)



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AFTERNOON SESSION

1:50 P.M.

(Jury in box.)

S E T H D U B I N, resumed.

DIRECT EXAMINATION CONTINUED

BY MR. MALONEY:

Q Do you recall whether or not you participated in Mr. Albert's telephone conversation with Mr. Sinsheimer?

A Yes, I am quite sure I spoke with Mr. Warren.

Q Can you tell us what the substance of that conversation was between you and Mr. Albert and Mr. Sinsheimer?

A Well, it was not a three-way conversation. I think either Milton was on the phone with Warren or I, but it was never three-way.

What we told Warren was that Milton had come to the judgment that it was not 600, but at least 800 and maybe more that was needed to make the business viable and also that the losses that we had been told about for the first two months of '70 were greater than were permissible under the contract.

Q Do you recall whether or not either you or Mr. Albert in your presence described to Mr. Sinsheimer the reason why 800,000 rather than 600,000 would be needed?



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A I think the best I can recall, only to the extent that the losses for the prior year had been a whole lot bigger than anybody thought.

Q What conclusion was reached in that conversation as to what you and Mr. Albert should do?

THE COURT: I am not worried about conclusions. Mr. Sinsheimer was the boss?

THE WITNESS: Yes.

THE COURT: What did he say when you told him all these things?

THE WITNESS: He said "Call it quits and we won't go through with it."

Q Did he say anything else in this conversation?

A No, he said this was simply all far beyond what he believed the situation to be and that we would not close because of those two reasons.

Q That was the end of that conversation?

A Yes.

Q What happened next as far as you can recall?

A Oh, Milton and I tried to see whether there was some way that the situation could still be saved and we went into some further discussions.

THE COURT: With whom?

THE WITNESS: With Mr. Kovar and Mr. Lewis.



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Q Could you tell us what the substance of those discussions was?

A Well, on the question of the $600,000 or $800,000 that was necessary, Milton's view was that it required 800, and probably a fair bit more than that to keep it viable, and there was a fairly lengthy discussion, as I recall, among the four men that were together, and in the end we came up with the kind of arrangement that was put down in the amendment to the contract, that is, for the next 200,000 over the 600,000 that we had been obligated originally to put into this business, for the next 200,000 there would be a charge for interest.

THE COURT: How did that $800,000 figure first come up?

THE WITNESS: In Milton's judgment.

THE COURT: Albert?

THE WITNESS: Yes, I am sorry.

THE COURT: Did he say anything more about that?

THE WITNESS: No. That is all I recall, that there was simply that much more money necessary.

THE COURT: Do you have any knowledge that Plessey had known something about this $800,000 before that?

THE WITNESS: No.

THE COURT: You had no knowledge?



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THE WITNESS: Oh, no.

THE COURT: There was evidence here about a meeting of the British Plessey on that subject on or about that date. But you didn't know anything about that?

THE WITNESS: No.

Q What else was discussed among the four of you?

A I think that was all that was discussed at that point. As I remember the sequence -- and I am not that clear on this -- I think there was a second call at that point back to Warren and I think Warren became persuaded that that kind of resolution of that problem could be acceptable as long as there was also a resolution of the second problem, that is, that this company was losing too much money too fast at the beginning of 1970, and on that one Warren wanted a change on the date when management could be assumed by Plessey.

Q Did he give you and Mr. Albert some instructions with respect to that issue?

b2 A Yes.

Q What were those instructions?

A His instruction was that the month that had to be the first month, figuring the $15,000 that had to be made, be not June, as it previously had been, that Plessey could take over management by the end of May if



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the results of the company were not favorable enough.

Q And following the second conversation with Mr. Sinsheimer was there another discussion with Mr. Kovar and Mr. Lewis and yourself and Mr. Albert?

A Yes. We passed on to them the word what the decision was.

Q During these various discussions did there come a point where you told Mr. Kovar and Mr. Lewis that you would not proceed with the closing unless they agreed to these two changes?

A Yes.

Q Did you explain to them the reason why you were refusing to close?

A By "you" you mean --

Q Either you or Mr. Albert in your presence.

A Yes.

Q What were the reasons given them for your refusal to proceed without the amendments?

A The reasons were the two that I talked about, the losses for the first two of the months of the year were far in excess of $40,000, which the contract permitted, and, secondly, that the amount of money that was being put in -- well, that is not said quite right -- secondly, that the results of 1969 which we had been led to believe,

when we got the financials, were $200,000 off.

Q During that discussion do you recall either Mr. Lewis or Mr. Kovar making any claim that the losses for January and February were not in the area of $75,000?

A No.

Q Do you recall any comment by Mr. Lewis or Mr. Kovar that the $75,000 figure included items that should not be included for the purposes of making the calculation under the paragraph of the contract we discussed this morning?

A No.

Q Do you recall any comment either by Mr. Lewis or Mr. Kovar in your presence concerning whether or not Mr. Kovar had authority to agree to the changes you were demanding?

A No.

Q I show you a copy of Exhibit 5 in evidence and ask you if you can identify that document.

A Yes, this is an amendment to the contract that was put together in Barbados when we were all together.

THE COURT: Did you participate in the preparation of this?

THE WITNESS: Yes.

THE COURT: Tell me how it was done? How did you

get this document up?

THE WITNESS: I recall we dictated this to a secretary at ISL. I think I probably did most of the dictating, but it certainly was done with Mr. Lewis with me-- I don't recall about the other two gentlemen -- and I think, as I recall, he chimed in when he thought I was off base, and it was dictated out and typed up.

THE COURT: You dictated in his presence and then if he had points he would change it?

THE WITNESS: Yes.

Q And you and Mr. Lewis had agreed to the form of the document -- do you recognize the signatures of the persons who signed it?

A Yes, Mr. Albert signed for Plessey and Mr. Kovar for ISL.

Q Referring to the language itself, just taking paragraph number 1, is that the amendment that referred to the charging of interest at the rate of 10 per cent on the additional $200,000?

A That is right.

Q And paragraph 2 would be the amendment to paragraph 5D with respect to management control?

A Right.

Q Paragraph 2 says that the February 18th letter is

hereby further modified so that "If the profits of ISL commencing May 1, 1970, crediting to the month of May the net profits of the two-month period comprised of March and April, 1970, but not charging any net loss for that period average less than $15,000 per month--"

Now, what was your understanding of the meaning of that language?

A Well, I understood the meaning of that to be that beginning with the month of May if the profits for the month of May together with any profits that there might have been in March and April total $15,000, Plessey had no right to assume management. Then you went on to June, and then you took May and June together, or, rather, the profits of March and April, plus the results of May, plus the results of June, and then you went to the third month, and so on.

THE COURT: And if the profits for May were less than $15,000 what did you construe then?

THE WITNESS: That depended on whether there had been profits in March and April.

THE COURT: Let's assume that the profits for March, April and May were less than $15,000.

THE WITNESS: Then Plessey had a right to assume management.



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BY MR. MALONEY:

Q Referring to the letter of February 18th, Plaintiff's Exhibit 4, I believe it is, I believe you testified that your understanding of the language there was that ISL would have to achieve the $15,000 profit in the month of June?

A Yes.

Q Was it your understanding that under the language of the February 18th letter that ISL would have any right to credit profits of April and May to the June results to achieve the $15,000 profit level?

A No.

Q Now, taking Plaintiff's Exhibits 4 and 5, the February 18th provision and the March 2nd amendment, and reading further it says -- or if there have been three consecutive months of losses during that measuring year (including the first two months thereof)," now, do those words remain identical in both the February 18th letter and the March 2nd amendment?

A I think so, yes.

xx (Defendant's Exhibit DW marked for identification.)

Q Mr. Dubin, I show you a copy of Defendant's Exhibit AB in evidence and I show you Defendant's Exhibit DW for identification and I ask you if you can identify those



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documents?

A Yes, this is the opening and given to us at the closing by Mr. Lewis' firm.

THE COURT: Which exhibit is that? Which is the opinion?

THE WITNESS: They both are.

MR. MALONEY: Well, AB is the one that is already in evidence, your Honor, and I think it is DW that I just marked for identification.

THE COURT: You mean it is the same thing?

MR. MALONEY: No, sir. We are going to get to that in a moment.

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Q Mr. Dubin, referring to Plaintiff's Exhibit 3, the agreement of February 4, 1970, paragraph 13D, starting on page 19, paragraph 13 reads:

"All of Plessey's obligations under this agreement are subject to fulfillment prior to or at closing of each of the following conditions--"

And then we go down to paragraph D: "Plessey shall have been furnished with an opinion dated the closing date of counsel for ISL, Sonnenschein, Levinson, Carlen, Nath & Rosenthal to the effect that --"

And skipping down to subparagraph 2, "The execution, delivery and performance of this agreement by ISL have been



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fully authorized and approved by all requisite action of ISL's board of directors and stockholders and that the agreement has been duly executed and delivered by ISL and constitutes the valid and binding obligation of ISL in accordance with its terms."

Now, would you tell us what your understanding of that paragraph of the agreement was?

A Well, it is quite normal in agreements of this sort for each side's lawyers to give to the other side an opinion that what their clients are doing they are authorized to do, and that the people who are actually doing it in the name of their client, if it is a corporation, is authorized to act on behalf of the corporation.

Q Was it your understanding that Plessey would not be obligated to close the transaction if the Sonnenschein firm did not furnish an opinion in accordance with the paragraph I have just read?

A Correct, yes.

Q Now, referring to Defendant's Exhibit AB, which is already in evidence, and Defendant's Exhibit DW for identification, can you tell me which of those documents is the copy of the opinion which Mr. Lewis gave to you at the closing?

A DW.



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MR. MALONEY: I offer it in evidence, your Honor.

MR. McCONNELL: No objection.

xx (Defendant's Exhibit DW received in evidence.)

Q Referring to the two exhibits, Mr. Dubin, did Mr. Lewis make any change in the opinion letter during the closing?

A Let me just read a few words and then perhaps it is more readily understood.

Q This is from which one? DW?

A This is from DW. The paragraph begins, "Based on the foregoing examination and conversations with the officers of the company we do not know of any litigation pending or threatened," and so on. Mr. Lewis put an asterisk after the word "litigation" and down below inserted "other than two actions for wrongful dismissal seeking damages which in the aggregate are less than $550." He excepted that from his opinion that there wasn't any litigation against ISL.

Q But he did not want to give any opinion with respect to the two lawsuits involving $550? Is that correct?

A That is right. He was excepting that from his opinion.

Q At any time during the closing did Mr. Lewis



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say to you that the opinion letter which he was delivering to you pursuant to the agreement did not apply to the amendments which were signed at the closing?

A No.

Q Did he make any change in the opinion letter to exclude the amendments from that opinion letter?

A No.

Q By the way, Mr. Dubin, during these discussions between you and Mr. Albert and Mr. Kovar and Mr. Lewis leading up to the March 2nd amendments, did you ever state as one of the reasons for demanding those amendments that the closing was taking place in March rather than February, as you had originally anticipated?

A No, that was not the reason for it. We had no right to make believe it was happening the beginning of February. Their contract said what it said, but I did say to them -- we had all been trying to get this closing on as far as possible, and I did say to them that if we had all been able to just get it done a couple of days earlier, the measuring year would have started one month earlier and the Plessey assumption of the management provision wold have been operable a month earlier. So that really it was just by quirk that we were two days into March that led to the measuring year starting in April, rather than



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March and so on.

Q Would you refer to Plaintiff's Exhibit 2 of the second draft of the agreement. Refer to paragraph 7 thereof.

A The second draft? Okay, I have it.

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Q Yes, paragraph 7.

A I have it, yes.

Q Is that the paragraph which refers to the closing in Barbados?

A Yes.

Q Did you make some handwritten notation in that paragraph?

A Yes, I inserted the date March 2.

Q On the second draft of the agreement?

A Yes.

Q Do you recall when you made that notation?

A No, I can't say for sure. It certainly would have been the very end of January, the first day or two of February.

Q When was the Plaintiff's Exhibit 3, the final agreement between the parties, signed?

A The 4th of February.

Q Do you have any recollection of anything happening that would have caused you to go back to the second draft after February 4, 1970, to insert the date March 2 in paragraph 7 of the agreement?

A Oh, no.

Q Mr. Dubin, I show you copies of Plaintiff's Exhibits 8 and 9 in evidence and ask you if you can



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identify those documents?

A 8 is called the minutes of directors' meeting of International Scientific, Ltd. on January 31, 1970.

9 is called International Scientific, Ltd. notice of extraordinary general meeting of shareholders.

Q Is there proxy material attached to Exhibit 9?

A Yes.

Q Do you have any recollection of when for the first time you saw either of those documents?

A The first time I saw these was when my deposition was taken by Mr. McConnell six weeks ago? Something like that.

Q Six months ago?

A Six months ago? All right.

Q In any event, do you have any recollection of seeing those documents at any time on or before March 2 and 3, 1970, the date of the closing?

A No.

Q Do you have any recollection of Mr. Lewis giving you copies of either of those documents at the closing or prior to the closing?

A No.

MR. MALONEY: I have no further questions.

THE COURT: Is it customary in a closing of



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this kind to ask for a certified copy of the resolution?

THE WITNESS: It is often done.

THE COURT: You didn't do it here?

THE WITNESS: I did ask, but I didn't receive them. That didn't seem to me to be a troublesome thing because I had the opinion of a fine law firm that the corporate procedures had been followed.

CROSS EXAMINATION

BY MR. McCONNELL:

Q Mr. Dubin, do I understand it to be your testimony that the language commencing May 1, 1970, crediting to the month of May the net profits of the two-month period comprised of March and April, 1970, but not charging any net loss for that period averaged less than 15,000 per month to mean that ISL had to make at least $15,000 in the month of May and thereafter averaged 15,000?

A No, that is not what I said.

THE COURT: He already said what he meant. Why do you try to reinterpret. He already told you what he thought it meant.

Q I guess my question is, Mr. Dubin, why didn't you say what you have testified your understanding is, namely, that they had to makeat least 15,000 in the month of May?



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A Because I've said I thought that's what it said.

Q Asumming Plessey rightfully assumed the management responsibility pursuant to the provisions of paragraph 5-D of the agreement. Did you understand that thereafter Plessey had an obligation to run the business in a manner which would allow the assets to generate profits?

A It is a funny way of putting it. I think the answer is probably yes. It is not the language of the agreement but it is probably close enough.

Q I show you Plaintiff's Exhibit 111, which is the report on the proposed acquisition of ISL, and ask you if that document shows you on the distribution?

A Yes.

Q When did you receive a copy of that document?

A Oh, I can't tell you for sure when I received it except that I had not received it when I went to Barbados. How much later I just don't recall.

Q Do you recall that you did receive a copy some time?

A I know that at some time I've seen that, yes. That's the one with a bluish cover on the original?

Q I believe so.

A Well, forget that.

THE COURT: This might have been blue in 1971.



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It isn't blue any more. It has gotten rather brownish by now.

Q Do you recall whether when the final agreement, February 4th agreement was signed, the blank for the date of the closing was filled in?

A Do I recall when?

Q No, do you recall whether it was filled in.

A Oh, I --

THE COURT: He wants to know -- you are asking him at the time of the closing whether --

MR. McCONNELL: No, excuse me. At the time of the signing of the February 4th agreement, was the date of the closing written in then?

A I think so, yes.

THE COURT: Were you present when anybody signed it?

THE WITNESS: Yes.

THE COURT: Who signed it?

THE WITNESS: Mr. Sinsheimer and Mr. Kovar, I believe.

THE COURT: You say at that time you think the closing date had been written in?

THE WITNESS: That is my recollection, right.

Q When Mr. Albert said that he found out that the



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company had lost $74,000 for the two-month period, January and February, did he give you any breakdown as to what that loss consisted of?

A No, I don't think I said that Milton found that out. I think that was a number that was told to us by the ISL people.

Q All right. But isn't it the fact that that $74,000 included approximately $19,000 of legal and audit expense --

THE COURT: Do you know that?

Q -- and another 17,000 of bank interest?

A If you are asking whether anybody told us what the elements were, the answer is I don't know.

THE COURT: You don't recall anybody telling you?

THE WITNESS: No, sir.

Q Mr. Dubin, I show you what has been marked as Defendant's Exhibit R, and I believe it is in evidence.

MR. MALONEY: I believe it is.

Q Which purports to be a statement of profit and loss for the month of February, 1970, and for the year to date, and ask you if you can identify that as the statement which was given to you or to Mr. Albert by --

THE COURT: Have you ever seen this statement



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before?

THE WITNESS: I have seen it, sir, but it was not given to us at the closing.

THE COURT: You did not see this at the closing?

THE WITNESS: No, sir.

THE COURT: You don't know whether Albert did or not. You can say you didn't --

THE WITNESS: I don't think he did, either.

THE COURT: Well, you don't know whether he did or not. But you didn't see it?

THE WITNESS: I didn't see it.

Q And it is your testimony that this was not given to you at the closing?

THE COURT: That wasn't given to him.

Q Do you know whether it was given to Albert?

A Well, I was surmising a moment ago --

THE COURT: Don't guess if you don't know.

Q Did you, after talking with Mr. Sinsheimer tell Mr. Kovar and Mr. Lewis that unless these two amendments were agreed to, that Plessey was not going to close?

A Well, there is a distinction to be made between the two on the question of the additional $200,000. That was the result of a good deal of negotiation in a sense among the four people who were at the closing on



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the question of moving the date -- moving up into May what had been applicable to June before. That was, yes, a flat demand. The only negotiation that happened on that was to permit ISL, if it made profits in March and April, to use those profits toward May.

Q But, of course, everybody knew that they were not going to make a profit in March or April?

A I didn't know.

Q You didn't?

THE COURT: At the end of May if the profits are less than $15,000 what are you averaging?

THE WITNESS: You are taking -- you are assuming losses in March and April?

THE COURT: I am just taking -- that's the first month. Your agreement says that if the net profits average. At the end of May what are you averaging?

THE WITNESS: Just the single month.

THE COURT: All right. Your point is that you average one month?

THE WITNESS: That's right.

THE COURT: If it is two months, then you are averaging two months?

THE WITNESS: Then you are averaging two, and so on.



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MR. McCONNELL: That is all I have, your Honor.

THE COURT: Any other questions?

MR. MALONEY: No, sir.

THE COURT: Thank you very much. You are excused.

(Witness excused.)

MR. MALONEY: Your Honor, we have some scheduling problems, too, and we would like to use Mr. Gretton as our floating witness somewhat as we did with Mr. Kovar and interrupt his testimony with witnesses coming out of turn.

THE COURT: We will start with Mr. Gretton.



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DAVID GRETTON, called as a witness on behalf of the defendant, being first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. MALONEY:

Q Mr. Gretton, would you state your full name and address for the record, please?

A David Gretton. 3621 Consuelo Avenue, Thousand Oaks, California.

Q Would you tell us how you are presently employed?

A Yes, I am manufacturing manager for Plessey Chatsworth in California.

Q What are your responsibilities in that position?

A Responsible for the total manufacturing that is carried out in that plant at Chatsworth.

THE COURT: What do they make out there?

THE WITNESS: Glasto metal seals for the transistor and semi-conductor industry.

THE COURT: You are not making cores out there?

THE WITNESS: No, I left that behind.

Q Would you tell us what your educational background is, Mr. Gretton?

A Yes, I attended part-time day release course in



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England at Stoke-On-Trent Technical College and obtained a high national certificate in electronics.

Q What has your work experience been?

A After leaving the Roval Air Force, I joined Elliott Automation in 1957 as a computer engineer. And I stayed with Elliott Automation for approximately 10 years leaving Elliott Automation as their northern area service manager.

THE COURT: What is the northern area?

THE WITNESS: It was the north of England and all of Europe including the Iron Curtain countries.

In 1967 I joined Plessey as technical manager of their Lisbon facility.

Q That was in 1967?

A 1967.

THE COURT: You went south?

THE WITNESS: I went south, yes.

Q What were your responsibilities in -- was it Lisbon, you said?

A Yes. Total responsibility for all engineering which included mechanical engineering and electronic engineering for the Lisbon facility.

Q Who was your superior in Lisbon?

A The first two years it was Mr. Mike Lewis.



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Q Is that the same Mr. Lewis that's been mentioned from time to time?

A That's the same Mr. Lewis. Afterwards Mr. Peter Hewitt took over for Mr. Lewis.

Q What was Mr. Hewitt's title in Lisbon?

A He was the factory manager for the matrix operation.

Q Was he in complete charge of the operation?

A Of the matrix operation. In Lisbon Plessey has a very large facility employing 3000 people where we have telecommunications and a matrix operation.

Q How many people are employed in the matrix operation?

A In 1967, about 300. In 1970, 1200.

Q Did there come a time when Mr. Hewitt left the plant at Lisbon?

A Yes, Mr. Hewitt left. I am not too sure of the day. February, March, 1970, and I took over from Mr. Hewitt.

Q Do you recall the circumstances under which Mr. Hewitt left?

A Only that he went to Barbados.

Q Upon Mr. Hewitt's leaving, did you assume his position at the Lisbon plant?



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A Yes, I did.

Q Did there come a time when someone asked you whether you would be interested in going to Barbados?

A Yes, in May, 1970, I was asked to come to England to meet with Mr. Don Clarke and Mr. Norman Crocker and we had an interview with Mr. Clarke where he said there was a possibility that a vacancy would occur in Barbados and would I be interested.

Q And --

A I talked it over with my wife and we agreed, yes, we would like to go to Barbados.

Q Do you have any recollection of whether or not they told you why the vacancy would be occurring?

A At that time, no.

Q Did you subsequently learn how the vacancy came about?

A Yes, I understood that Peter Hewitt was not too happy in Barbados, or Peter Hewitt's wife was not too happy in Barbados and she would like to come back to Lisbon.



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Q All right, did you accept the position?

A In June I accepted the position, yes.

Q Do you have any recollection of the approximate date that you arrived in Barbados to assume your new position?

A It was a Monday, and I believe it was June 15th.

Q Do you recall how long Mr. Hewitt remained at the plant in connection with handing over management to you?

A Yes. I stayed there for two weeks with Mr. Hewitt. Then I left to come back to Lisbon to pick up my wife and family and then flew back to Barbados, so I think I was away from Barbados for one, one and a half weeks.

Q Then what dates would that have been?

A Somewhere around the end of June, beginning of July.

Q Do you have any recollection of when Mr. Hewitt left Barbados?

A He stayed for about a further week, I believe, and then left, but I am a little hazy. I am not too sure.

Q Would you describe the conditions which you found in the plant in Barbados when you arrived and assumed control from Mr. Hewitt?

A The plant layout was completely different to



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anything I personally had ever seen before and I found that as well as doing core memory work they were also doing cable harness, which I hadn't realized until I got there. There was a lot more expatriate -- a larger expatriate staff than I thought for an offshore operation. We had been used to running an offshore operation with the minimum number of expatriates.

Q Did you discuss with Mr. Hewitt his proposed relayout of the floor plan?

A Well, I had been involved in that a little earlier. Mr. White had come over from Barbados to Portugal in May to have a look at the Portugese operation, and he had brought with him a floor layout of the Barbados facility, a basic sort of plan of the factory. While he was in Lisbon we had had what I call the Lisbon layout transposed on top of this floor plan, so we had in fact effectively laid out the Barbados facility with the Lisbon plan at the end of May.

Q Who was Mr. White?

A Mr. White was a manufacturing engineer employed by ISL.

Q Do you know when he had started with ISL?

A I believe in 1967.

Q Did Mr. White remain with ISL through the end

of the measuring year?

A Yes, he did.

Q As you understood it, what were the reasons for changing the floor plan, the layout of the work benches and stations?

A We understood that there was a large order book, and when we computed just how many people were needed to sort of doing the work that was allegedly on the books, there was no way that they could fit into the factory the way the factory was laid out. By doing the Lisbon layout we could in fact get I think it was about 100 more people in.

Q Could you explain --

THE COURT: Let the jury and I in on that. What was the difference?

THE WITNESS: I believe it's a more efficient use of space.

THE COURT: I am not quite clear what the difference is.

THE WITNESS: I think it can be described that the ISL people -- the layout was a bench in which at least four, possibly eight girls would sit side by side.

THE COURT: On either side of the bench?

THE WITNESS: You would have eight on each side



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and there would be a partition and there would be a partition here so the girl can't see the girl on the other side. The Lisbon layout, if you can imagine it, is you have one line with the services, the electrical supply, and on either side you have a single work bench in a sort of herringbone fashion, the idea being that the girls can concentrate on what they are doing more easily with this layout.

THE COURT: How many girls per herringbone?

THE WITNESS: Approximately 25. We tried to set it up so it would be an average product line layout. So, one supervisor or one lead would have -- one lead operator would have the girls under his control.

THE COURT: How are you on the blackboard?

MR. MALONEY: I think it would be helpful, your Honor.

THE COURT: I would like to see it, and I think the jury would, too. It would be sort of interesting to see what the difference is rather than have you explain it.

Off the record.

(Discussion off the record.)

THE WITNESS: The Plessey layout is that you have this mackel tray, which is about four inches across.

THE COURT: That's Lisbon now?

THE WITNESS: In Lisbon, and we put this into



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Barbados.

THE WITNESS: With your electrical supplies and you have the work stations like this with the operators sitting here, here, here and here, and the connections for a soldering iron or magnifying glass are here so that everything is easy access. Then her own tools and her own work or sort of confined to this area. Of course, what you can see here is this work required fairly high concentration. You want to minimize talking. You want to keep it quiet. So, a girl, if she wanted to talk to somebody, you know, she really had to turn her head to do the talking. We wanted to keep this down to a minimum because of the high degree of concentration that the work demanded.

THE COURT: That was because of the use of the magnifying glass?

THE WITNESS: Not all of them used magnifying glasses, your Honor. The inspectors used them. If you sort of built the unit, tested it, and then if it required test repair, then you normally sort of had to go with the microscope to do the repair.

THE FOREMAN: Was there a partition in front of there?

THE WITNESS: No, there is no partition, and



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there would be sort of 25, approximately, per line, and then you would have the lines set out with a sort of a three-foot gangway down here and at the end of the line there would be a sort of gangway as well to enable full access to each individual.

THE COURT: All right, when you came to Barbados what did you do?

THE WITNESS: Then you had a table with the sort of partition here and then the girls would sit here, here, here and at this side. One of the problems with this-- with this partition being so high, your foreman or shop superintendent -- if he was over here, he had difficulty seeing this girl, so you didn't really know -- you know, it was difficult for shop floor control. Also there was a sort of a tendency to share tools, so you would find out-- the thing we didn't like was the girl say here, she would be using her tweezers and she would suddenly find out that they were at this end and there was continuous shouting, "Okay, I want me tweezer back," and this way we could keep everything to this area and keep better control of the work force and see what the individual girl was doing.

THE COURT: All right, thank you.

Q Mr. Gretton, do you have any recollection of what the total cost was for the new work benches and lighting



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fixtures and so on?

A The contract we signed in Barbados -- we had these benches made in Barbados -- was 48,000 Barbadian dollars, which would be 24,000 U.S. dollars, I believe.

Q So the best of your recollection is that was the total amount of money that was spent on changing the work layout?

A Yes, I believe it is, because we were able to sort of sell out some of the benches -- the larger benches, and that helped defray the cost for the new.

THE COURT:When did you make the change, sir?

THE WITNESS: We started -- I signed the contract with the Barbadian company who were going to build the benches in September, 1970, your Honor.

THE COURT: When was the work completed?

THE WITNESS: It was completed -- we tried our best to get it complete during the -- we closed the factory down in December for the Christmas break. We tried our best to get it completed during that period. We had problems with the light fittings -- this has been mentioned before-- and I think it was some time in sort of January before it

b2 was complete as to how we wanted it.

THE COURT: When was the work done on making this change?



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THE WITNESS: It was done during the week and at weekends. It was -- what we did was -- of course, all the factory was not occupied, so whatwe would do is we would clear out the old benches from the area that wasn't occupied, put in the new one and then move people up to the new bench and start from where they had moved, in an attempt to minimize any interruption to the work force.

THE COURT: To minimize any interference with the actual production?

THE WITNESS: Yes.

Q Mr. Gretton, I believe there were some questions directed at Mr. Clarke yesterday about a PC board 48-00-something--

MR. McCONNELL: 86.

A Yes, 86. Our infamous board. This was the printed circuit board that had been designed for use in a stack that was being built for nuclear data and that was also being built for Hewlett Packard. It was a PC board about six inches square and at the edge there were various pieces of circuitry.

MR. MALONEY: Excuse me a minute, I have never been able to understand this myself. I think this one might be helpful on the board, too.

THE COURT: Do you want to try your hand at that?



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THE WITNESS: I will try my hand at it.

THE COURT: There is no harm in that.

You might pull it around just a little bit, too.

Can you ladies and gentlemen see it?

All right.

A It was a printed circuit board --

THE COURT: What are the dimensions of that?

THE WITNESS: About six inches by six inches and it's just over a sixteenth of an inch thick.

Q Excuse me, Mr. Gretton, maybe you should explain to his Honor and the jury what a printed circuit board is. Maybe they don't understand.

A A printed circuit board is made of phenolic material -- these days it's fiberglas. Built into the sort of board is a copper circuitry. The circuitry of course takes on any shape depending on how the board is being used. This particular board had got what we call the sort of fingers on the edge here. These went all the way around the board and there was approximately 64 or 128 on each side. We would put the core area, these ferrite cores in the center here and then wire through and then solder the wires to a particular pin. If I can amplify this a little bit, the actual pin shape came right to the edge of the board, went in, was round and hold a hole



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drilled there. Now, they were all like this. The wire would come through from the underside -- because we had core on each side --

THE COURT: Would you tell us what would be the width of the pin or the length of the pin?

THE WITNESS: The length would be half an inch. The width would be probably an eighth of an inch. The problem seemed to be with this particular board -- if you can imagine, you have to drill at least 128 of these holes-- I'm sorry, at least 64. My recollection is not too good as to whether it was 64 or 128 per side, but certainly it was 64, and you had to get the hole right in the center of this pad, so there was a real problem with the PC manufacture lining of this board on his drilling machine and getting the required registration. What we were finding was that the hole would get drilled here, so it would be sort of cutting away some of the printed circuit that we were going to use to make a soldered joint. What we were finding -- this led to a very -- if we used the board with the hole registration off we didn't have too much printed circuitry here, copper, to sort of make a joint and the joint became unreliable. This was what was happening with the Hewlett Packard stacks in particular, that on our testers they would appear okay and when we shipped them

to the computer user, and the computer uses this particular circuitry much faster and in a completely different environment, that we were getting the wire breaking where we made contact to this reduced area. So, that was what was causing quite a lot of rejects, but, of course, the biggest problem was we couldn't get boards from the suppliers and my understanding is that in Farmingdale, and later in Boston, they tried several PC board manufacturers and all of them sort of would look at the drawing and say yes, we can do it, and when they tried to actually give us 100 a week or 150 a week, which is what I really required, they couldn't do it; we were rejecting them. So, in Boston what we asked them to do was to redesign this to make it easier to use and what they did was to try and increase the area. The easiest way to do it, because, you know, you were rather restricted, was to make this kind of tear drop shape so that if your registration is off you will have quite an area of copper to make your joint.

THE COURT: It would take a larger bit of copper?

THE WITNESS: Yes. That's what we had to do, get more copper there so that we could allow for the drilling machine to be operated in registration. Fortunately this wasn't complete and the design didn't take place and we didn't get into a manufacture before we finally got this



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going.

THE COURT: November of 1970?

THE WITNESS: Of 1970. We first had to decide what the problem was and then find a way to rectify it.

THE COURT: All right, let's take our afternoon recess.

(Recess.)



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BY MR. MALONEY:

Q With respect to the P.C. board, do you know who had designed the original board there you said was giving you problems?

A Either Mr. Boyce or Mr. Keppel of ISL.

Q Who was Mr. Keppel?

A He was the chief engineer.

Q Do you know how long he had been with ISL?

A I believe since 1968.

Q He is the gentleman that left some time in August or September?

A August or September, 1970.

Q Who was Mr. Boyce again?

A Mr. Boyce was an engineer, electronic engineer, with ISL. I am not sure when he joined ISL. I think again 1968.

Q Did Mr. Boyce remain with the company through the end of the measuring year?

A Yes, he did. He transferred to Boston, I believe, in October.

Q Do I understand you correctly that during the demonstration this problem with the old P.C. board was one of the items which was causing us to fall behind on the production of the Hewlett-Packard stack?



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A Yes, it was.

Q I believe there was some testimony during the plaintiff's case about the fact that there were two different stacks for Hewlett-Packard. Will you explain what those two stacks were?

A Yes, one was what we call a 30-mil stack which used that particular type of board. This also used the core that was 30-thousandths of an inch in diameter. There was only five of the 22-mil stacks that had been built when I got there. This was a very difficult stack that we were attempting to build for Hewlett-Packard Company using cores that were 22-thousandths of an inch in diameter.

Q Is it correct that the smaller the dimension of core the more difficult it becomes to do the stringing of the wires through the cores?

A I think it is fair to say that.

THE COURT: How does somebody string these very small cores?

THE WITNESS: Well, we go to a lot of trouble to make sure that the core is very accurately lined up so that one core is accurately lined up with another, and we try to get them as close together as possible, so that you have a tunnel effect, and provided the girl

gets the needle in theright core, and we have done our job in making sure these cores are lined up, then that needle will go through.

THE COURT: How are the lined-up cores held together?

THE WITNESS: There are two ways, either using double-sided sticky tape, so that you vibrate the core so they are sticking up, and then transfer them to the sticky tape. Or you have them on a rubber solution, which also holds them, and you cure the rubber solution. This also holds them and gives them a little bit of elasticity, so that if the needle hits the core, the core will sort of move slightly in that rubber solution.

THE COURT: So the operator has to take a needle and put it through these tiny cores?

THE WITNESS: Yes, and provided she is accurate in the placing of the needle in the first core.

THE COURT: Would she do that with her own eyesight on the small cores?

THE WITNESS: Yes, we found they could do it without any sort of magnifying glass or microscope.

THE COURT: It takes pretty good eyes?

THE WITNESS: We make sure we give a fairly good eyesight test to the people before we hire them.



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THE COURT: I think the jury and I might have trouble.

MR. MALONEY: I would.

BY MR. MALONEY:

Q Now, at the time you arrived in Barbados in June, which of the stacks was the one which was the larger release from Hewlett-Packard?

A This 30-mil stack.

Q Is that the one that we indicated was 72 in arrears as of the first seek of June?

A Yes.

Q I believe Mr. Tucker indicated that those arrears had even gone up more substantially a couple of months later?

A That is right, yes.

Q Now, I think during the demonstration you explained that one of the reasons for this problem was the design of theold P.C. board. Was there another problem involved in the area of testing the Hewlett-Packard 30-mil stack before it was shipped to the customer?

A Yes, to begin with, we were at a loss to understand why the finished unit would appear to be okay and pass all the tests we subjected it to in Barbados, and yet when it got to Hewlett-Packard it would fail, and we



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did quite a bit of investigation in this, had correspondence with Hewlett-Packard, and talking to Hewlett-Packard trying to find out exactly what was failing.

Q At that point you perhaps should explain to his Honor and the jury what is involved in testing the finished stack before it is shipped to the customer.

A Well, we put the finished stack on to a general purpose tester and we run the stack on that tester, and you have to test each individual core and make sure each individual core meets the specifications that the customer has set. The problem is that the tester does not test as fast as a computer uses the particular stack, and this is where we felt we were having trouble, that we were testing and we were not finding these intermittent faults that we had because of bad solder connections.

THE COURT: Is this testing through the use of electric current?

THE WITNESS: A predetermined electric current of a particular shape, and you go through a lot of trouble to make sure you have a good shape pulse.

THE COURT: If the current goes through the way you think it should, that is an indication that the cores are properly connected?

THE WITNESS: Yes. What you try and do is



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put particular patterns in the stack and then you sort of determine what pattern you are going to put in the stack, and then you read out from the stack to make sure what you think is in the stack is actually in there. But the tester is really limited in knowing exactly what to put in the stack, and a computer can do much more with the stack and put a much more diverse pattern of information into the stack.

2 Q I think you were talking about your investigations and correspondence with Hewlett-Packard concerning this problem?

A Yes. We then realized that the tester we had was running slow in comparison with the computer; there was no way we could speed the tester up any more. So we decided that the only solution was to try and get hold of a computer for this Hewlett-Packard Stack, that we would go through all the normal production testing using the stack testers, if they tested out good on the stack tester, then we would put it on to the computer.

THE COURT: You would be giving the same test that the customer gave it?

THE WITNESS: Yes. They always inspect these when they arrive at the factory, and we wanted to make sure we did that test before we sent it to them.



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Q Do you recall from whom we purchased the computer?

A From Hewlett-Packard.

Q Do you recall how much that cost?

A Between eight and nine thousand dollars.

Q What effect did the purchase of the computer have on the quality problems that you had been experiencing without the computer?

A The first thing was that it showed us that we did have a problem, that, in effect, we had been accepting their stacks from our stack tester and assuming they were good, and when we put them on the computer we could make them fail. So the first effect was to slow down production, because the product that we had previously thought was good we now found wasn't, and then we put it on a computer and had to do our fault-finding on the computer and, of course, when we shipped the stack out after it had been tested by the computer, then, of course, it was of good quality.

Q What was the relationship of the reject rate before we had obtained the computer and after we obtained the computer?

A My recollection is that the reject rate was at about 33 per cent in June, July, August, in this period,



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and after we got the computer it dropped to less than 10.

Q Was the quality of the stack also improved by redesign of the new P.C. board?

A Yes.

Q Who was in charge of the quality testing of the finished stacks?

A Mike Boyce.

Q And were any of the other engineers involved?

A Don Ballantine was a test engineer at that time.

Q He works with Mr. Boyce?

A He worked with Mr.Boyce on the testers.

Q And what was Mr. White's responsibility or title?

A I am not sure of his exact title. His responsibilities were manufacturing, engineering, and material control.

Q I believe Mr. Clark alluded in his testimony yesterday to the problems we experienced in establishing an inventory control system. Could you explain to his Honor and the jury why the system it was attempting to implement wasn't working?

A Peter Hewitt had attempted to put in a card index system in the stockroom. The "Clark" had said we were working on mini-maxi quantities in the stockroom. What we were finding was that people were abusing the



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cards and that they were not going through perhaps the stock control "clark" when they wanted to draw things out of the room.

Q When you say "clark," that is what we call "clerk"?

A Yes. There was not sufficient control in this area. People were overriding the person in charge of the room, going in, taking out whatever they wanted, not recording it anywhere. So that where we would go to a card before we started a job on the shop floor and assumed we had enough components to manufacture a particular job, when we actually came to do the manufacture we would find we were short.

Q By the way, when you came to Barbados in June, was any other new Plessey employee assigned to Barbados permanently? Or just yourself?

A Just myself.

Q So the rest of the staff at the factory remained the same as it had been under Mr. Kovar? Is that correct? At least, as of June, 1970?

A Yes.

Q Who would have been responsible for getting the people to comply with the inventory control system?

A Peter Hewitt and George White were doing that



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when I arrived.

Q Did they ever become successful in getting the employees to comply with the system?

A Yes, but we did, in fact, change the system slightly in that we put in a system where we would issue kits on the shop floor. Say we wanted the shop floor to make 25 particular stacks. We would issue 25 complete kits of parts to the shop floor, and the production manager would sign for those parts and Production was then responsible for those parts as they were on the shop floor.

Also, when I got there there was no scrap control, and we instituted a scrap procedure as well in an attempt to control the scrap that was being wasted on the shop floor.

Q In connection with the preparation of price quotations, what was the role that the engineers and other people in Barbados played in preparing those quotations in the summer of 1970?

A The engineer would look at the particular set of drawings or a request for quotation and decide whether he felt in his mind we could, in fact, build that type of stack in Barbados. He would decide by looking at the drawings what the problems were likely to be from an engineering point of view; he would also come to some



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sort of evaluation what core type we should use, because there were many core types in use. He would then pass it on to the manufacturing engineer, who would try to come up with an estimate on how long it would take to assemble that sort of core stack.

Q What was the status of the Magnavox project when you arrived in Barbados?

A It was confused. We could not find a purchase order, an actual piece of paper from Magnavox outlining exactly how many stacks were on order. What we did find was a telegram of Telex -- I think it was dated some time in January, 1970 -- which indicated that we had to build a prototype, and dependent on that prototype -- there was, in fact, I believe, five units on order, but they were subject to the first of the five passing rather severe qualifications at Magnavox and at an independent test house.

Q Do you recall who was responsible for the Magnavox prototype?

A There was a group of people, because it was so complex and it was effectively Keppel, Boyce, Ballantine, and a man called Phil Wood.



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Q What were their relative responsibilities with respect to the building of the prototype?

A I believe Keppel was in charge of the overall project with Phil Wood working very closely as a sort of mechanical design engineer.

Q What were Boyce and Ballantyne's responsibilities?

A Boyce and Ballantyne were responsible for test and quality control procedures.

Q What did they involve in the case of the Magnavox stand?

A Best described I think, something like ten pounds weight of paper work we estimated would be required with that stack when it qualified. There was an enormous amount of documentation to prepare with that stack when it went for qualification, showing exactly how we built it, exactly how we tested it or proposed to test it and how we would sort of build and test and control the production of any production units.

Q Who was responsible for developing these written test specifications?

A Boyce and Ballantyne.

Q When you arrived in Barbados in June or July, how far along were they in developing this written material?

A They got, I guess, down on paper but as far as



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I could see, no specific documentation.

Q Who are Mr. Michalsky and Mr. Launius?

A Mr. Michalsky was a qualify engineer. Mr. Launius was a supervisor, a line supervisor.

Q Do you recall how long these two gentlemen had been with the ISL?

A Mr. Michalsky, I believe, had been there since 1967. Mr. Launius arrived later. Again, I'm not too sure, '68 or '69, I believe.

Q Do you recall what their experience was before joining ISL?

A No, I don't.

Q What were their responsibilities at the plant?

A They were -- Launius was working on the cable harness project. Michalsky was sort of dividing his attention between the cable harness and quality control on the memory side.

Q Do you recall what the -- what were the conditions of the cable harness project when you arrived in June, 1970?

A Again, there appeared to be confusion as to exactly what we were making, what materials we had on hand, who was supplying materials, whether it was ISL or Honeywell. We also had severe or appeared to have severe quality problems.

Q Were you present in Barbados when the gentleman from Honeywell visited the plant to make his inspection?

A No, I was not.

Q Would you tell us what led up to the decision to stop taking new orders for cable harness?

A I advised against it because I felt there was nobody in Barbados qualified to make cable harnesses, that we didn't really want that type of business --

THE COURT: Why not, assuming you had somebody qualified?

THE WITNESS: Well, we hadn't, as it happened. We felt that we wanted to concentrate on building memory cores and when I was there, I was told that there was enough or we could get enough orders to fill that factory on memory cores alone without having to bother about cable work.

THE COURT: Who told you that?

THE WITNESS: This is when I joined. I was told by the Plessey people.

THE COURT: By the Plessey people?

THE WITNESS: Yes.

Q Based on your understanding of what the projected orders were when you joined the factory, came to the factory in June, was the existing plant capacity sufficient to

handle those projected orders?

A It was not.

Q I think you testified that the revised plant layout was one of the things that they wanted to do in order to increase the plant capacity to handle those projected orders, is that correct?

A That's right.

Q Installing the plant layout, what effect would that have had on the area of the plant which was then being used for the cable harness work?

A I'm not quite sure I understand the question.

THE COURT: I don't either. When you changed--when you made these changes, did it increase the work area for the memory work?

THE WITNESS: Yes, the idea was -- you could not do cable harness work using these tables. These tables were not big enough to allow you to do cable harness work.

THE COURT: I think the question really is when you were making this change-over, it would increase the work area in the plant, would it not?

THE WITNESS: It would, your Honor.

THE COURT: Part of the plant would still be left to be used for cable harness?

THE WITNESS: No, there would not.



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THE COURT: You say this would use the capacity of the plant for memory work.

THE WITNESS: That's right, your Honor, yes.

Q I believe, I can't put my hand on the precise exhibit now, but I believe Mr. McConnell introduced in evidence yesterday an exhibit which was a letter from you to Mr. Clarke claiming that the expatriate staff was becoming satisfied because of not getting new employment agreement. Could you explain to his Honor and the jury how that situation came about?

A Yes. When we got to Barbados in June, we investigated what the expatriates were paid and how they were being paid. We were not too happy with the arrangements in that there was a sort of split salary in that some of it was being paid in, I believe, the Bahamas and some in Barbados and that split was uneven between individuals so that -- and also it would appear that there were certain expatriates who appeared to be paid less than some of the Barbadian nationals on the island or in the factory, I should say. We came up with this scheme where we would make the salaries that were being paid in Barbados much more realistic and more acceptable. We also, in an attempt--

THE COURT: Acceptable to who, the fellow getting the salary?

THE WITNESS: No, we had in mind the Barbardian government. I think it had already been hinted that we had problems in this area and I was later given a very severe lecture on this by an official of the Barbadian government that the Barbadian government were aware of problems with expatriates in Barbados and the way they were being paid.

At that time Milton Albert, in an attempt to sort of compensate for the higher taxation that would be-- that the expatriates would be subject to in Barbados, came up with a scheme where he would pay a pension scheme, there would be a pension scheme for the expatriate staff. This was done in June and we had no more about it during August and, of course, the expatriates were being to get a little uneasy. They were told they were going to be included in a pension scheme, what's happening.

THE COURT: The effect of all this, as I understand it is, the expatriates, I think that's a terrible name for these poor devils but they are Americans or English who were in Barbados, is that right?

THE WITNESS: Yes, your Honor.

THE COURT: But the Bahamian government was interested to see whatever their salary was, they got the taxes on the full salary and also the problem of



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exchange control, they wanted it paid in Barbadian currency, is that right?

THE WITNESS: Yes.

THE COURT: So that after this happened, the expatriates were having to pay Barbadian taxes they probably didn't have to pay before and there was some thought that that might be a little pleasanter if there was a pension plan under which eventually they might get a pension, is that right?

THE WITNESS: That's right.

Q Mr. Gretton, where was ISL obtaining the core which it was using in manufacturing the product?

A Ampex and EM&M.

Q Was there some problem about the price we were paying for the core during 1970?

A The price had been negotiated in March, 1970. It was sort of a fixed price contract, and as I understand it, it was dependent on the number of core you would use in a particular period.

Q What happened to the price of core during the measuring year?

A It's my understanding that the price of core dropped quite dramatically during that measuring year.

Q Under the agreement with Ampex or EM&M, were



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we able to obtain the core for the declining market price or were we obligated to --

MR. McCONNELL: I object to that as construing the document. If he wants to ask him--

THE COURT: The point is, you are saying in March ISL and the Barbados plant had a firm contract to buy core for the next year at a fixed price, is that right?

THE WITNESS: Yes.

THE COURT: All you are saying is you understand during that period the world price of core dropped, I suppose, is that right?

THE WITNESS: Yes. I should point out the contract with Ampex and EM&M, for example, if we bought 500,000,000 core, then we would get it for $2 a thousand. If we were to buy 700,000,000, and these are not actual figures, if we were to buy 700,000,000, then of course, we would get them cheapter.

THE COURT: You would get a quantity discount?

THE WITNESS: Yes. There was also bill back into this contract. If we didn't use the quantity that we said we were going to use, then at the end of the contract we would have to pay back money to Ampex or effectively pay a higher price for the core.



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THE COURT: Where were the cores, were the cores delivered to you? Did you send them back?

THE WITNESS: It was sent out on a delivery schedule.

THE COURT: Some of the cores they had holding for you?

THE WITNESS: They were producing them for us to a set schedule based on the contract, yes, your Honor. So we put them on hold. If we said we would take 500,000,000 and then suddenly said no, we can't use them, we can only take 300,000,000.

Q Do you recall that there came a point where Mr. Hourihan was discharged?

A Yes.

Q Do you recall the circumstances under which Mr. Hourihan was discharged?

A Yes, I was advised by the Barbadian government that Mr. Hourihan was not to be allowed to work in Barbados.

Q What was the reason why he would not be allowed to work in Barbados?

A Because they had said when they renewed his work contract in, I believe it was 1969, that it would be for one year only but they also advised me that Mr. Hourihan was engaging in other activities on the island. He was not only a controller for ISL but had other financial



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interests on the island.

Q Was that permitted under the work permit he had?

A No, it was not.

THE COURT: Mr. Hourihan was what you call an expatriate too?

THE WITNESS: I am not sure. I think Mr. Hourihan had been working for another company on the island when Mr. Kovar hired him.

THE COURT: He was not a Barbadian?

THE WITNESS: He was not a Barbadian. He was a Canadian.

Q Do you recall who discharged Mr. Hourihan?

A Mr. Albert.

Q Do you recall whether he had discharged him before or after you learned from the Barbadian government that they would not renew Mr. Hourihan's work permit?

A It was after.

Q Do you recall whether there was any other reason why Mr. Hourihan was discharged?

A Yes. Mr. Hourihan had gone away on vacation at the end of July after being told that the only -- he would only be allowed to go away on vacation if he had stayed with the auditors and insured that the auditors had carried out a complete audit of the books, of the ISL

books. I think it was for the year end June 1970.

Q What was Plessey's fiscal year?

A July 1st to June 30th. July 1, 1970, to June 30, 1971.

Q To your knowledge was -- in connection with the preparation of Plessey's financial statement for the year ended June 30, 1970, were Price Waterhouse retained to audit the books of ISL for the months between March 2nd, when we acquired the company, and June 30th?

A Yes, they were.

Q Was that Mr. Jones and the people under his supervision who were retained?

A Yes, it was.

Q And those are the auditors with whom Mr. Hourihan was supposed to have been working before he left on vacation?

A Yes, he was.

Q Did there come a time when Mr. Michalsky and Mr. Launius were discharged?

A Michalsky, his contract expired at the end of November, I believe, and I just said I would not renew his contract.

Q Do you recall the reasons?

A I didn't feel he was the right sort of person to be in Barbados.



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Q Mr. Launius had been the gentleman who was supervising the cable harness business?

A Yes.

Q By that time had the Honeywell cable harness contract been terminated?

A It had been terminated and Mr. Launius came to me and said he would like to give me three months' notice and I agreed and said that I would like him to stay on just to clear out the Honeywell cable form and then as soon as that was over he could leave.

Q Do you recall who cancelled that contract?

A Honeywell.

Q Do you recall, I believe there was some testimony that we imposed a $10,000 cancellation charge on Honeywell when they cancelled. Could you explain that to his Honor and the jury?

A Yes. Honeywell phoned up and cancelled the order and we had a lot of material that we had bought, and ISL in general, I should say, had bought for that contract. There was no way we could get rid of that material on the island and it was doubtful that we could even sell it in the United States. So we worked up a sort of cancellation charge for Honeywell.

Q When you told Honeywell that there would be such

a cancellation charge, what was Honeywell's response?

A They accepted it in the beginning and then this is what caused the confusion. Then about a week later I got a telephone call saying that they would not accept the cancellation charge.

Q What happened as a result of that?

A We agreed to complete -- well, in the meantime, once they had accepted the cancellation charge, some of the confusion arose and I immediately cancelled any outstanding purchase orders we had for material. Then they came back and sort of wanted to reinstate the order. We then agreed we would only reinstate those orders for which we had material in house at the time. All the others we were prepared to forget.

Q Do you know how it all wound up in the end?

A I believe we came to an agreement as to which cable forms we would supply Honeywell and which ones we would just forget about.

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Q Do you recall that with respect to Standard Memories, there was some dispute between Standard Memories and ISL in 1970?

A Yes. This took place within the first week of my arriving there. We found out that Standard Memories in fact were hiring away ISL labor, trained labor, and

I know that Mr. Kovar had been rather annoyed at this because contrary to what Mr. Tucker had said, Standard Memories were actually stringing core in Barbados. They were not just performing the sort of stacking operation with the stacks they received from ISL. And so Milton Albert called for a meeting with the Standard Memories' general manager and the local general manager and a Mr. Art Weber, who I believe was vice president of Standard Memories, and that meeting was held in my office in Barbados. And we explained it had come to our attention that Standard Memories were recruiting away ISL labor and then in this conversation it also came out that ISL in fact had got rather a lot of material for Standard Memories in the form of finished or partially finished stacks. And at that stage we agreed to sort of attempt to complete the remaining orders on the books for Standard Memories.



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Q As of June and July of 1970 when this dispute was still going on, do you recall how much money Standard Memories owed ISL?

A When we went through the books we found it was about $50,000.

Q Was there some dispute with Standard Memories as to whether or not that was the correct amount owed?

A Yes. There was a lot of dispute.

Q Was that dispute based upon this dispute concerning the materials?

A Yes. It was material allegedly supplied to ISL to complete various projects.

Q Did ISL have that material?

A When we came to sort of check out, no, but we could not find the material in the factory.

Q What effect did these various disputes have on the relationship between ISL and Standard Memories as a customer?

A They were reluctant to do business with us.

Q Mr. Gretton, do you recall whether or not Cambridge Memories was a customer of ISL during the measuring year?

A Not to my knowledge, no. They were not a customer.

Q From the time you came to ISL in June, 1970, at that time were you still building or attempting to build



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prototypes for Cambridge?

A To my knowledge, no.

MR. MALONEY: Your Honor, would you mind if we took an additional five-minute recess?

I had anticipated that there would be greater cross-examination today and I don't really have--

THE COURT: If you think it's going to expedite you, we will.

MR. MALONEY: Yes, sir, I think it would.

THE COURT: All right, we will take five minutes, ladies and gentlemen, sure.

(Recess)

THE COURT: You may proceed, Mr. Maloney.

Q Now, Mr. Gretton, going back to the testing equipment, do you recall how much testing equipment was in Barbados when you arrived in June?

A Yes. They had one CTC tester and two testers on the line that were manufactured by a company called Digital Equipment Corporation, and one other DC tester that was not in working order. The two DC testers in fact had been supplied by Plessey. One had come from Lisbon in 1968 and the other one I believe had arrived in Barbados some time after the measuring year, but before June.

Q Was that existing test equipment adequate to



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perform the quality testing on the volume of product that you were manufacturing in Barbados?

A It was adequate in June. It was not adequate for the projections that were being made for that business, because, for example, the DC tester can only test 30 and 50 mill stacks, or cores. The CTC had to be used for anything 22 mill or less.

THE COURT: What does DC mean, direct current?

THE WITNESS: No. DC is Digital Equipment Corporation.

THE COURT: And what's CTC?

THE WITNESS: Computer Test Corporation.

THE COURT: In other words, it's the maker?

THE WITNESS: Yes.

Q It's the names?

A Yes. CTC were probably -- were the biggest manufacturer of that type of test equipment in the world.

THE COURT: Where are they?

THE WITNESS: They are an American company.

Q Was there some problem with respect to the testing equipment available and the Magnavox prototype?

A Yes. When we came to look-- as to exactly how we are going to test the Magnavox planes and then the stacks, we found that the CTC would have to be modified,



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and in fact I gave instructions to take it off the air for three weeks during August while modifications were carried out to that tester. It was also obvious when we really started to look into that Magnavox project that assuming the various projections that were being made for Magnavox were correct, if we went into production, then that CTC tester would do nothing but test Magnavox.

Q It would therefore be unavailable for testing products being manufactured for other customers?

A It would be unavailable for testing other products, right.

Q During the measuring year did you request that Mr. Clarke and Mr. Crocker supply you with additional test equipment in Barbados?

A Yes. I believe it was in August that I pointed out the problems with the test equipment. I should also point out that the two DC testers, although allegedly identical, in fact only one of those could test stacks. The other one had to be left on the sort of individual memory planes.

THE COURT: Mr. Maloney, I think you are leading the witness quite a bit. Ask him what he did about it. Try not to ask him any leading questions.

Q All right, what did you do about the testing



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equipment situation?

A I contacted Mr. Clarke and advised that I would like at least two new pieces of test equipment. I specified the one that I was familiar with, which was the sort of Plessey Mark VI general purpose stack tester.

Q Do you recall how much money ISL spent during the measuring year on this new test equipment which you ordered?

A The testers from Plessey I believe were $24,000 each and we bought two of them.

Q In addition you bought the computer from Hewlett Packard for $8,000, $9,000?

A Yes, we did.

THE COURT: What was the life of one of those testers?

THE WITNESS: We estimated a Mark VI stack tester would last anywhere from five to ten years. It was a fairly advanced tester with advanced circuitry.

THE COURT: When you purchased these from Plessey, were they expensed or capitalized, or do you know that?

THE WITNESS: We bought one new one. The one that came in November, that had originally been in Lisbon. I think it had only been in Lisbon one or two years.

THE COURT: You don't know how that was handled



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accountingwise?

THE WITNESS: Accountingwise, no, I do not.

THE COURT: You don't remember?

THE WITNESS: No.

Q Mr. Gretton, I show you a copy of Defendant's Exhibit AH, which is Mr. Kovar's memorandum of May 26, 1970. Referring to some of the customers in there, taking Compat first, there is an order indicated of $93,860. I think during Mr. Kovar's testimony we established that as of the first week of June only $25,000 worth of product had been released. Do you recall whether or not there were any further releases under that order by Compat during the measuring year?

A My recollection is there were no further releases.

Q Did we solicit further releases from Compat?

A Yes, all the time, because we had in fact bought material against some of that, you know, expecting a release on that order.

Q Who was the sales rep who was responsible for that account?

A I'm not sure.

Q Do you have any recollection of why no further releases were made by Compact?

A I don't know for sure, no.



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Q To your knowledge did Compat ever indicate that the further releases were not forthcoming?

THE COURT: Again I think all you are doing is making a lot of statements. He doesn't know.

MR. MALONEY: All right, your Honor, I withdraw that.

THE COURT: Thank you.

Q With respect to Magnavox, did we ever successfully build a prototype during the measuring year?

A No, we did not.

Q So, was any part of the $198,000 order indicated on Mr. Kovar's memorandum released?

A No, it was not.

Q With respect to the varying order of $26,900, did we ever obtain that order, to your recollection?

A No. We submitted a prototype soon after I arrived in Barbados and we also had ten units in production. The prototype failed and I can remember being asked to sort of submit another unit, however when I read the report as to why the prototype had failed, I took one look at the other unit that we had got in production as backup and it was obvious that that would fail also. So, I refused to let that unit go forward.



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Q Is that the prototype that was discussed during Mr. Tucker's testimony?

A It was one of the prototypes, yes.

Q Referring to Singer Librascope, or Librascope on Defendant's Exhibit AH, the order of $47,500, do you have any recollection of what product that was that we were building for Librascope?

A Yes. That was a sort of semi-military stack that we were building for Librascope. I used the form semi-military because it was for a military application, but the sort of control that they exerted on us was nowhere near the same as they would have had to or there would have been required for Magnavox.

Q Do you recall whether or not we built and delivered that entire order during the measuring year?

A I believe we did. I think we even took a further order.

Q Do you recall whether or not there were any requests for quotations from Librascope during the measuring year on which we bid?

A No, I don't think so.

Q There is a customer listed, MDS, would that be Mohawk Data Sciences?

A Yes, I believe it was.



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Q Mr. Kovar indicates an order of $47,150. Do you have any recollection of whether or not we built and shipped that order to Mohawk during the measuring year?

A We were building a stack and were fairly successful in building a small stack for Mohawk and we continued right through the measuring year building this particular stack.

Q Do you have any recollection of whether we obtained additional orders from Mohawk?

A No. We only ever built in production the one stack. There was I believe three prototypes that were in the system when I took over, but we seemed to have a lot of trouble getting those to work. I'm not sure of the reasons at the moment. I know that I held them back despite being told that there was a deadline because I wanted to make sure those units were right when we shipped them out.

Q How about the first customer, AIL, the order of $22,704, do you recall whether or not they built and delivered that order during the measuring year?

A We certainly built a lot of units for AIL during the measuring year.

Q Do you have any recollection of AIL cancelling any order during the year?

A No. I think AIL honored all the agreements that

had been signed.

Q I believe there was some testimony and some exhibits introduced in connection with quality and delivery problems with Nuclear Chicago and Nuclear Data. Do you have any recollection of what those problems were?

A In June for Nuclear Chicago, ISL -- we were only building a very old design stack, a 50-mil stack. It is my recollection that we continued building that particular stack throughout the measuring year. I believe we were asked to quote some time during the measuring year for newer and more modern stacks. I know we built prototypes. I'm not sure whether we got a production for those.

Q How about Nuclear Data?

A With Nuclear Data we were certainly building a stack and we continued building a stack throughout the measuring year. It was a 30-mil stack, very similar to the Hewlett-Packard one. We also, I think, built one or two different other types of stacks for Nuclear Data.



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Q Mr. Gretton, when you arrived at the plant in Barbados in 1970 was there a problem with respect to the quality testing procedures, the way in which they were being administered?

A Yes. They were very haphazard. The procedures that appeared to have been written were not being followed.

Q In what respects?

A Well, we found,for example, that line supervisors were stamping off product while the inspectors were at lunch, and the product was sort of coming to the end of the line allegedly good, and when we got it into the test room we found it was not and should not have been at the test at that stage.

MR. MALONEY: May I have the answer read?

(Answer read.)

Q I am not sure I understood the last answer. Would you explain what that problem was? Who were the line men?

A The production supervisors and the lead personnel working in the production unit, these were the people that were stamping off parts and product.

Q I believe Mr. Clarke testified yesterday that there came a time when reporting was transferred from the



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North American Region to England so that Mr. Crocker became responsible for the Barbados operation and the Boston facility, rather than Mr. Clarke.

Do you recall what effect, if any, that had on the operation of the plant?

A It had no noticeable effect on the plant.

Q Was there any change in personnel in Barbados as a result of that changeover?

A No change at all.

Q Do you know whether or not it had any effect on the operation of the Boston facility?

A No, I don't think so.

Q I believe Mr. Clarke testified that Mr. Keppel left the company some time in August or September, 1970. Do you recall the circumstances under which Mr. Keppel left the company?

A Yes. It had been agreed it would be better to transfer the engineering facility to the United States, and it is my recollection that Mr. Keppel was offered the job in the United States as the chief engineer, and I had agreed to that and suggested that he negotiate with Mr. Parr over his transfer, and it is my understanding that there was some disagreement between Mr. Parr and Mr. Keppel over exactly what his function would be in the



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United States, exactly how much he was going to be paid, and he then left the company.

Q Do you have any knowledge of whether he was terminated or whether he resigned?

A It is my understanding he resigned.

Q After Mr. Keppel left the company who was offered the position that had been offered to Mr. Keppel?

A Mr. Boyce.

Q Was Mr. Boyce assigned to the Boston facility?

A He went in October, I believe, yes.

Q What kind of engineering staff did that leave in Barbados?

A It left Don Ballantyne, who was a degree engineer, anelectronics engineer, myself, of course, as an electronics engineer; we also by then had got a Barbadian national who was trained as an electronics engineer, who was very good, and then on the mechanical engineering side we had Mr. George White, Mr. Arnold Knoll, and Mr. Phillip Wood.

Q Did Mr. Keppel's leaving the company and Mr. Boyce's assignment to Boston have any adverse effects on the operation?

A Not in Barbados, no.

Q What was the relationship between the engineering department in the Boston facility and the engineers down in

Barbados?

A I would say very good, mainly because Mr. Boyce and Ballantyne had been very close when they were in Barbados and they knew each other very well and were able to work together.

Q What type of engineering function were the engineers in Boston performing?

A They were doing design engineering. At my insistence we retained production engineering in Barbados. I felt that it was not good having a sort of engineering bastion doing production layouts and definitive procedures for production, because whereas they might have been suitable for an American firm, the situation was different in Barbados. We had to be able to dictate our own method of production and procedure in Barbados itself. So this is where Mr. White used his expertise.

Q What is the relationship between the engineering design prepared in Boston and the production engineering documents prepared in Barbados?

A Well, in Boston they would prepare engineering drawings and a fairly detailed assembly drawing. When I came to Barbados I introduced into Barbados what was known as a manufacturing engineering booklet, and this was a very simplified document that each girl had and was



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unique at the particular job that she was working on, so that it would take her in very, very easy stages through that job. The girls were working off engineering drawings, bits of paper, just about anything on the shop floor. We introduced for each project a manufacturing engineering booklet. These were made up in Barbados by our manufacturing engineering group, and as I say, detailed precisely and in very simple terms how to manufacture a core memory system.

Q Mr. Gretton, did you know Mr. Parr personally?

A Yes, I have known him since about 1957.

Q How had you met Mr. Parr originally?

A He worked for Elliott Automation as a salesman, marketing man, selling computer and computer peripheral equipment in Europe and behind the Iron Curtain. When I joined Plessey I found that he was at Plessey and he was the European salesman for memories with Plessey.

Q Do you recall how long he remained with Plessey in England?

A I believe he had been with Plessey about two years and then he joined core memories in Ireland and working for Core Memory Data Products, selling memory systems and other associated computer peripheral equipment.

Q When you refer to core memory products with



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respect to these two positions, are you referring to the same type of products as were being manufactured in Barbados?

A Exactly the same, yes.

Q What was the normal amount of time that would be involved in getting into --

THE COURT: I don't like the way that starts. What is the question? How long does it take to do something?

MR. MALONEY: Yes.

THE COURT: Well, how long does it take to do what?

MR. MALONEY: From the time the customer places an order how long --

THE COURT: For what?

MR. MALONEY: For core memory products.

THE COURT: All right.

Q From the time the customer places an order for core memory products how long does it take to get into production of that order under normal circumstances?

THE COURT: How long did it take in Barbados?

THE WITNESS: It would take 12 to 14 weeks.

Q Could you explain why there was that amount of time involved between the placing of the order and the



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beginning of production?

A I should say we would start delivering 12 to 14 weeks from receipt of the order some quantity of units. The biggest problem was, of course, obtaining materials. They were long lead times on materials, so you got an order, you had to then precisely define the bill of materials to manufacture that product, put out orders for that bill of materials, take delivery of it in the meantime, and parallel with this you had to start working out exactly how you are going to make it, do your manufacturing engineer drawings, make sure that you now precisely know how to put the thing together, and then once you got the product, you also had to make sure you had girls trained to be able to manufacture the product if it was new, and maybe a 20-mil core, you had to be sure you had girls who could string this 2-mil core.

Q Mr. Gretton, do you know when the Boston facility was closed?

A May, 1971.

Q So that the Boston facility remained in operation from the time when it was opened in September or October through the end of the measuring year?

A Yes, it did.

Q Do you recall when Mr. Parr left the company?



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A Yes, May, 1971.

Q So he also remained through the end of the measuring year?

A Yes, he did.

Q In connection with the transfer of control of the ISL operation from Mr. Clarke to Mr.Crocker, what is your understanding of the circumstances under which that transfer came about?

A I received a company directive where it had been decided I think some time in June, 1970, and the thing was not implemented until January, 1971, where various products for Plessy would come under worldwide organization, instead of this sort of geographic control that had been exercised prior to January, 1971. Memories was part of this sort of worldwide operation.

Q Did Mr. Clark's performance of his job during the time he was in control have any part in the transfer of control from Mr. Clarke to Mr. Crocker?

A Not to my knowledge.

Q Do you recall when the Boston facility was actually opened?

A I think Mr. Parr moved to Boston in August 1970.

Q To your knowledge was ISL charged during the



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measuring year for any of the expenses of the Boston facility?

A We were given instructions not to charge the Boston facility.

Q Mr. Gretton, during the measuring year did you use your best efforts to make the operation profitable?

A I did.

Q Who was Mr. Allsop?

A Mr. Allsop was seconded to Barbados from Plessey Towcester, where he had been working as a cost control accountant in Towchester.

Q Was he permanently assigned at some time to the Barbados operation?

A He was assigned there for one year. His instructions were to Plesseyize the accounts and also to train Mr. Fenty to take over as comptroller.

Q Mr. Fenty was Mr. Hourihan's assistant?

A He had been Mr. Hourihan's assistant.

THE COURT: You said "seconded."

THE WITNESS: Yes.

THE COURT: What do you mean "seconded to Barbados"?

THE WITNESS: He was sent to Barbados. It was sort of a temporary transfer.



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THE COURT: You call it seconded? He was temporarily sent to Barbados?

THE WITNESS: Yes.

Q Who replaced Mr. Hourihan?

A Mr. Allsop.

Q So that he was acting as comptroller?

A Yes.

Q Did Mr. Penty remain with the company throughout the measuring year?

A Yes, he took over as comptroller in June, 1971.

Q And I think you used the term Plesseyizing the accounts. Could you explain that term?

A Yes, Plessey has a very strict sort of accounting rules and regulations and they attempt to standardize it worldwide on the forms that I used for analyzing a business operation, and so John Allsop, who had been with Plessey for a long time, was to come over and introduce the Plessey form of reporting into Barbados. This is so that people like Mr. John Clarke and Mr. Michael Clarke can look at any accounting form from anywhere in the world and make a quick decision how things are going.



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Q Do you personally have any knowledge of what Mr. Allsop or what Mr. Fenty were doing to separate expenses incurred during the measuring year that were not to be charged to ISL?

A No, not really, no.

Q I believe Mr. Kovar testified concerning an agreement with Mr. Hewitt to send some memory planes for the Hewlett-Packard stack to Towcester for stringing?

A That's right.

Q At some time during the measuring year did a dispute arise or was there some mistake in the way Towcester was billing ISL for stringing the planes?

A Yes. It is my understanding through talking to Peter Hewitt and also seeing the correspondence that Towcester had agreed to string these particular plane. and charge the same time to build the planes as was being u sed in Barbados. In fact, when we got the invoice they were taking -- they indicated that they had taken twice as long to string these particular planes. I objected to this and I think you have seen that we finally -- we got them to agree to charge half the Barbados time.

Q So to your personal knowledge --

THE COURT: Was it the Barbados rate, was the difference between Towcester and Barbados?



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THE WITNESS: No, it was the Barbados standard hours. We had time-studied the job. Again, I am not too sure of the hours, but I think we said for one particular plane in Barbados we would string thatplane, we would only take ten hours.

THE COURT: And that would be paid for at the Barbados labor rate, is that right?

THE WITNESS: No, I think it had been agreed it would be charged at the sort of intercompany transfer rate, whatever it was at the time.

THE COURT: Well, did Towcester do the stringing in Towcester?

THE WITNESS: No, they did it in Lisbon.

THE COURT: Were the labor rates comparable with Barbados?

THE WITNESS: I believe so.

THE COURT: You think they were?

THE WITNESS: Yes.

THE COURT: Well, on that I think we will adjourn for the day and meet again tomorrow at 10 o'clock.

Thank you very much, ladies and gentlemen. I hope you have a nice evening.

(The jury left the courtroom.)

THE COURT: Gentlemen, as I mentioned at the



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commencement of the trial, I would like to get some questions from you which you would like me to put to the jury with your statement as to the law that you think applies to the questions and I would be grateful if you could get these to me by the end of the week.

MR. McCONNELL: You have our requests for instructions --

THE COURT: I am not going through that business. I want a series of questions and I want with respect to each question you to indicate what legal principles they should consider. That's the way I am still going to do that. I would like you to get me suggested forms of questions by the end of the week.

(Adjourned to March 21, 1974, at 10.00 A.M.)



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DALE OSBORN, called as a witness, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. MALONEY:

Q Mr. Osborn, would you state your full name and address for the record, please?

A It is Russell Dale Osborn.

Q Your address?

A My company address is 1700 Magnavox Way. My home address is 3033 Wyandott, Wayne, Indiana.

Q Will you tell us how you are employed?

A I am manager of subcontracts of the Magnavox G & I Division, the government division.

Q How long have you held that position?

A Approximately a year, but I have been in subcontracting work a considerable longer length.

Q How long have you been with Magnavox?

A Eight years. Could I say that I am representing myself and not Magnavox?

MR. MALONEY: Yes, sir.

THE COURT: The jury and I are not buying stocks so don't worry about it.

THE WITNESS: You shouldn't buy stock right now.

THE COURT: Okay, fine.



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Q Mr. Osborn, did you become involved at some time during your employment by Magnavox with what is referred to as the Difar program?

A Yes.

Q Could you explain briefly to his Honor and the jury what the Difar program involved?

A Well, the Difar program --

THE COURT: How do you spell Difar?

THE WITNESS: D-i-f-a-r.

A It is an acronym for I'm not quite sure what, but it is a submarine detection system that is airborne, it goes on aircrafts, and that jointly with the buoy they drop into the ocean they can tell how fast, what level and so forth that a submarine is going, that is, you know in our waters. We make the airborne electronics which picks up the transmission from the ocean.

Q What were your responsibilities in connection with the Difar program?

A Well, among many others was to purchase the memory system that goes into the airborne electronics.

Q What was that memory system?

A The memory system thatwe were purchasing was what is called an 8K by 32 bit stack.

Q Do you recall how many memory cores would be



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involved in that stack?

A A little over 500,000.

THE COURT: 500,000?

THE WITNESS: Yes.

Q That would be in each stack?

A Each stack.

Q Now, when, if you recall, did Magnavox obtain a contract from the government for this program?

A 1967.

Q How many units were involved in that government contract?

A Well, 880 some units. However, the government, because it is a multi-year program, they only release you so many at a time.

Q Over what period of time were those units to be delivered?

A Through 1972. We are still cleaning up the program on bits and pieces, but essentially the program was over in late '72.

Q Do you recall what companies were competing to supply Magnavox with the stack?

A Yes. There were many. We solicited, I think, every memory house in the United States and among those Ferroxcube, Ampex, Lockheed, Fabritech, Indiana General.



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Q How many vendors qualified to supply Magnavox with the stack?

A Two.

Q Do you recall which vendors they were?

A Yes, it was Electronic Memories, EMI, and Ferroxcube.

Q What is involved in qualifying as a vendor for the stack?

A Well, you have to go through a full military qualification program, which includes, among other things, environmental type testing, salt spray test, humidity test, shock test, temperature test.

Q Do you recall how long it took EMI to qualify?

A Well, they were in an advantageous position because on the R & D or the engineering portion of the Difar program we worked with them for about two and a half, three years prior to the production award, so essentially it took them three years.

Q Who is the other company that qualified to supply the stack?

A Ferroxcube.

Q Was Ferroxcube, in fact, issued an order?

A Yes.

Q Was Ferroxcube able to supply the stack?



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A No.

Q Do you recall why they were not able to supply the stack even though they had qualified?

A Well, yes. In so many cases, you can build one, but you can't build two or you can't make production, so they eventually were cancelled out and all the business was given to EMI.

Q Do you recall how many units were involved in the orders that were given to EMI and Ferroxcube?

A Yes, originally of the 880, the original quantity, 440 were given to each, but again they were also retained insofar as not being given a full release. They produced so many at a time.

Q Even though they were given an order for 440?

A We committed for 880.

Q But that entire amount would not be released at one time?

A That is right.

Q Do you recall the price at which the orders were given to Ferroxcube and EMI?

A $6,500.

Q Do you know who Mr. John Grey is?

A Yes.

Q Who was Mr. Grey?



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A A sales representative.

Q Representing whom?

A International Scientific, among other people.

Q Did there come a time when Mr. Grey approached you with respect to supplying memory stacks to Magnavox?

A Right, early in '68 or maybe the latter part of '67, but some time around there.

Q Did you have discussions with Mr. Grey concerning the possibility of ISL supplying the Difar stack?

A Right. We can always use another source and this is exactly what we told him and we more or less said, show and tell, if you can build a unit, we will buy a hundred units. Build and qualify a unit to military requirements, so it was a contingent type order.

Q What did you mean by show and tell?

A They had to build a unit, completely build it, and it had to pass the qualification test. We would not fund it, pay any part of the development.

Q In other words, Magnavox does not pay any amount to --

A We buy the unit, but we wouldn't pay the cost for developing it, whatever non-recurring costs they might have.

Q Do you recall when, if ever, ISL delivered any



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type of prototype to Magnavox?

A Well, they brought units, yes, and they tested it on our equipment. I am not surre at what point or period of time it was.

Q Do you recall whether by May or June,1970, ISL had qualified any Difar prototype?

A No, they hadn't qualified; no.

Q They had not?

A No, they did not qualify.

Q Were any orders given to ISL with respect to the Difar stack?

A As I said, a contingent order for a hundred, yes.

Q What was that contingent upon?

A Again, that would be if they could fully qualify a prototype or a unit to military requirements.

Q If they qualified first prototype, would the hundred units be released or would there be additional steps they would have to comply with before --

A There would be additional steps, yes, such as we would try it out in our equipment and things of that nature. I would refer that to the technical people.

Q Mr. Osborn, I show you Defendant's Exhibit CP in evidence and I ask if you can identify that document.



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A Yes.

Q Could you tell his Honor and the jury what that document is?

A If my memory serves me correct, wha we did in August or in 1968, we gave the contingency order for a hundred pieces and it did have a restriction on it that they had to qualify the unit within six months after release of the order and then a year and a half or so went by and there was a request that we issue a new order for these five stacks. The situation here again is that these five had to be fully qualified.



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Q So that after the prototype was qualified then they would have to build five additional units which would also have to qualify?

A No, I don't believe so. No.

Q I don't understand the relationship between the five units and the contingent order for a hundred units.

A Essentially the contingent order for a hundred units did run out because it had a contingency to do all this within six months, which they did not do in six months.

Q So this Telex refers to a new contingent order for five units?

A And the intent here was to still hold back in this case 95 units.

Q When would the additional 95 units have been released, if ever?

A Upon qualification -- whenever.

THE COURT: By qualification, you mean a unit that met your standards?

THE WITNESS: Our unit standards and the government's standards, fluid ounce specifications.

xx (Defendant's Exhibit DX marked for identification.)

Q Mr. Osborn, I show you Defendant's Exhibit DX for identification and I ask you if you can identify that



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document?

A Yes.

Q Could you tell his Honor and the jury what that document is?

A Well, as I understood the conversation from whomever was in the office representing ISL --

THE COURT: All we want to know is what this is. Is it a letter?

THE WITNESS: Oh, that is a letter that I sent to John Grey on August 14, 1970.

MR. MALONEY: I offer it in evidence, your Honor.

THE COURT: It will be received.

xx (Defendant's Exhibit DX received in evidence.)

MR. MALONEY: May I read it to the jury, your Honor?

THE COURT: Yes.

(Mr. Maloney reads Defendant's Exhibit DX to the jury.)

THE WITNESS: I would like to make it clear I still held back 95 units.

Q What was the confusion referred to in your letter to Mr. Grey, if you recall?



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A You are going back four or five years. I don't recall.

THE COURT: You don't recall that?

THE WITNESS: I really don't.

MR. MALONEY: I have no further questions.

THE COURT: Mr. McConnell?

MR. McCONNELL: Do you have that exhibit?

CROSS EXAMINATION

BY MR. McCONNELL:

Q Mr. Osborn, didn't Magnavox originally approve a prototype built by ISL recognizing that in the meantime Magnavox --

THE COURT: Wait a minute. You got about three questions. You mean, did they approve a prototype?

Q Let's start with that. Did they approve one prototype?

A When you say approve, let's define it. We didn't approve a qualified unit, and I would like to refer to our technical people who are here. Units were brought in and said it looks like we are going down the right road, but in the military version, no.

THE COURT: So you didn't?

THE WITNESS: No, and our technical person is here.



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Q Weren't there some changes in the specifications?

A Yes.

Q Didn't ISL build a prototype to the original specifications that had been given by Magnavox?

A Yes.

Q Didn't that particular prototype meet the original specifications?

A To the best of my knowledge, no, sir, again --

THE COURT: You have no recollection that it did?

THE WITNESS: No, I did not issue a component qualification report which says okay, you are blessed.

Q But you do recall that there was a change in the specifications?

A Absolutely, and I am sure I sent the letter which provides the specifications. I think that the situation was that ISL was rather far down the line to make any changes, and what they determined to do themselves was to go ahead and finish the unit and see if they were in the ballpark and we would check it out.

Q Didn't the new order provide prototypes according to the new specifications?

A Yes.

Q Did I understand your testimony to be that you are still holding back 95 units?

A Yes.

Q So if they did qualify on the prototype for the new specifications, then they would be eligible for the whole 100-unit order? Is that right?

A Yes, sir. I didn't release that 100 to EMI till 1972.

Q And that is what you mean by holding back?

A Yes.

Q Available?

A It was available.

Q Now, did you tell John Grey that if ISL qualified that they would not only get the 100-unit order but that you would increase the order to 200, and thereafter 400 units?

A I don't recall a number like 400. It is possible 200, because we ended up getting a lot of follow-on business and eventually it brought 1200 units from EMI, so there were probably 1200 units. If the price was good, I will buy all I can.

Q Didn't the first telegram from Magnavox which started this program refer to a P.O. number?

A Yes, we often assign a purchase order number for the matter of referring to something in the correspondence, but you don't always cut our type or send a formal document



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out, because we never agreed on the exact price of 6000, because there was always a contingent as far as ISL and Plessey, and there was the semi-conductors and so forth, and whether we could get a better price, but it was to be something less than $6500.

MR. McCONNELL: That is all.

THE COURT: Any other questions?

MR. MALONEY: No.

THE COURT: Thank you, Mr. Osborn. You are excused.

(Witness excused.)

MR. MALONEY: The defendant calls Mr. Vangelakos.



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CONSTANTINE VANGELAKOS, called as a witness on behalf of the defendant, being first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. MALONEY:

Q Mr. Vangelakos, will you state your full name and address for the record?

A Constantine Vangelakos, 3735 Pineview Drive, Fort Wayne, Indiana.

Q How are you employed, Mr. Vangelakos?

A Program manager in the engineering department, Magnavox.

Q With respect to the Difar program will you tell us what your responsibilities were at Magnavox?

A At the time I was project engineer for the core memory system.

Q What responsibility did that involve?

A That would be the responsibility for the design and implementation of the core memory system and following it into production and engineering support.

THE COURT: How long have you been with Magnavox?

THE WITNESS: About eight years.

Q By the way, what was the size of the memory stack?



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A It was 1XK x 32.

Q In inviting orders from vendors, orders for prototypes, was the term black box specification used?

A Yes.

Q Explain to his Honor and the jury what that term means.

A Well, a black box specification is where the device that we want to buy is specified as to how it is to perform, rather than getting into the details of the exact way that it would be made, so we would be more interested in what it does as far as what inputs have to be and what the outputs would have to be. It is what the functions are, rather than how we do it. That was left up to the manufacturer.

Q So the vendor can use whatever design he wants provided he completes the performance test established by Magnavox?

A That is correct.

Q Could you tell his Honor and the jury what is involved in the qualifications as to the first prototype, first stack of this kind?

A Well, this is a very complex part and it is also one that involves a close relationship with the vendor, because it is very difficult to work with. Therefore,



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we had a an extensive design test, qualification test. It involved vibration, humidity, altitude test, salt atmosphere, and then electrical performance test in each of these steps to see that it was still working satisfactorily.

3 And even those electrical tests were defined as to exactly what they should be.

I should point out there is another criteria, too. A qualification unit must remain like a golden standard in that if there are any design changes the whole test is subject to be required to be repeated.

Q I am not sure I understand that.

A Well, the unit that is qualified must be identical to the production units, absolutely identical.

Q What is done to insure that that is so?

A Well, steps like a complete data package, all the drawings of the manufacturer of the memory stack are to be submitted; they are signed-off drawings; they are control; they have quality control standards established to insure that the manufactured units will be identical to that first unit; they have processes for that first unit that are clearly understood by the manufacturing facility, so that they can duplicate additional units.

Q Now, with respect to the qualification of a proto-



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type, was the prototype submitted to Magnavox for the testing? Or did the vendor have the responsibility of performing the various tests?

A The qualification test? It was for the vendor to perform. He supplies a test plan which is approved by Magnavox and Magnavox has the option to witness any of the tests, and it was to be performed at a qualified testing laboratory subject to Magnavox's approval. The laboratory was subject to Magnavox's approval as well. It was not to be performed at the Magnavox Corporation, but an independent testing laboratory.

Q Is there some relationship between the environmental tests and the electronic tests?

A Yes, in that between each environmental test, like vibration, humidity, it is electrically tested to see that it is still running, and a memory stack takes a very large piece of test equipment to make it run. So it's not possible to physically take an electrical tester to the environmental test facility. So some kind of arrangement has to be made to go between the test facility and normally the manufacturer's testing area for the electrical tests, so it will be back and forth.

Q Now, in connection with ISL's attempts to build a prototype and to obtain an order from Magnavox, did you



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have occasion to visit Barbados and inspect the plant facilities?

A Yes, I did.

THE COURT: When did you visit Barbados?

THE WITNESS: I believe it was in early 1970.

THE COURT: That is the best of your recollection?

THE WITNESS: I'm trying to recall if it is '69 or '70, frankly. I made two visits to Barbados, and I believe one was in '69 and one in '70.

THE COURT: That is your best recollection?

THE WITNESS: Yes. In the time frame, it was before Plessey had obtained ISL and after.

THE COURT: Once before and once after?

THE WITNESS: Yes.

THE COURT: The testimony here has indicated, if I recall correctly, that Plessey came in in June, 1970 So one of these occasions would have been after that?

THE WITNESS: Yes, one was definitely after and one was definitely before.

Q To your knowledge, Mr. Vangelakos, was there any independent testing laboratory in Barbados which would have qualified --

THE COURT: What is your first question?



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Ask him whether there was a testing facility, and then you can ask him if it was qualified.

Q To your knowledg e, Mr. Vangelakos, was there a testing facility in Barbados which could have performed the environmental tests?

A No, not to my knowledge.

Q This, in any event, had to be an independent laboratory? These tests could not be performed at the vendor's own facility?

A It would have been highly unlikely. It would have had to have some unusual controls if we would have considered that.

Q Based upon your trips to Barbados, did ISL or Plessey have the equipment to perform the environmental tests which Magnavox would require?

A No.

Q To your knowledge was there any independent laboratory on the Island of Barbados which wouldhave been acceptable to Magnavox insofar as performing those tests?

A Not to my knowledge.



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Q Do you recall ISL in 1968 or 1969 submitting any prototype to Magnavox for qualification?

A No, I do not.

Q Do you have any recollection of ISL requesting that they be permitted to use Magnavox testing equipment?

A Yes.

Q Do you recall the circumstances under which that request was made?

A Well, the request was made that we had a memory stack tester that we used for our own internal testing, testing of stacks that we received from any vendor.

THE COURT: Was that in Fort Wayne?

THE WITNESS: In Fort Wayne, yes.

A (Continuing) So, the request was made could they plug it into our tester and just see if they were on the right track. That was an electrical test and it was just a very cursory type of thing, as opposed to a qualification test. There was no connection between the two.

Q To your knowledge by May or June, 1970, had ISL submitted any prototype to Magnavox which had passed qualification tests?

A No.

Q In your experience, Mr. Vangelakos, what is



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the amount of time from the date the memory stack is built to run it through the quality testing that you have just described?

A The qualification testing? It would be at least on the order of a month and a half.

Q What is the next step after the vendor has built a unit and it has gone through this qualification testing to the satisfaction of Magnavox?

A Then the normal procedure would be to release material for whatever they had a release from our purchasing, Magnavox purchasing.

Q Would that be the five units to which Mr. Osborn referred?

A Yes.

Q Would those units also have to pass some type of testing by Magnavox?

A Yes, we probably would have put these units in systems, in memory systems, wired them in to work with the actual electronics because up to this point all qualification testing is done with a tester. The final proof is in the final unit.

So, we would have been put in a final unit into our manufacturing flow and mated them into a total Difar system and performance system testing and we would



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have done that with more than one stack to insure that we had compatability because there is always an uncertainty, as extensive as the qualification testing is, that the unit may not work in the final system. So there would have to have been that assurance because of the critical nature of this particular unit.

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Q In your experience what is the amount of time required once the vendot has qualified one unit before the vendor delivers the additional units for testing in the Difar system itself?

A Well, it really depends on the way he chooses to release his material, but in the normal -- I would say if he hadn't released any material until he was sure he was qualified, which I would say would have been the normal procedure in my opinion, then it would have been like another 16 weeks.

Q When you say release material, would you explain that for his Honor and the jury.

A Well, let's say, since there was going to be one qualification unit and then the remaining five or four, whatever the number comes out, that the material would not be put on the assembly line to be fabricated into additional memory stacks until the first one was fully qualified. The reason being if anything fails in



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qualification, it may take a redesign. If ittakes a redesign, if the other units are in extensive stages of assembly, they may turn out to be scrapped where if they didn't assemble the parts, they kept, say, the raw material, the correction could easily be made with much less impact to the manufacturer. So, generally it is held off until full qualification. Any single failure could be grounds for complete disqualification.

Q I believe you said that the delivery of the units for testing in the Difar system would normally take 16 weeks from the qualification of the first unit?

A Yes.

Q In addition to that 16 weeks, is there any further period of time that would be involved before Magnavox had run tests on the units in the Difar system?

A Yes, there would be since once we received the memory stacks, we would have to go through incoming inspection, we would have to install them in units and we would have to get them into our manufacturing flow to get them into final systems. That probably would take on the order of an additional eight weeks.

Q Would any additional units be released to the vendor before those units had been tested in the Difar systems themselves?

A It would be highly unlikely.

Q With respect to the qualification testing, in addition to the running of the test, was the vendor required to develop some documentation in connection with those qualification tests?

A Yes. Directly in connection with it would be a qualification test plan and, as the tests are performed, there would have to be qualification test reports that are certified.

So, normally at the end of a qualification run, there is a rather thick report generated from a certifying lab, dated and signature and that is a direct result of the qualification.

Prior to the qualification there are other things like a drawing package that indicates the vendor has that under control. A vendor survey that shows the facility has been approved. Those are preliminary.

Q With respect to the environmental quality testing, in your experience does a vendor's unit usually pass that test the first time it is submitted to these qualification tests?

A In this specific instance of the 16K by 32 stack, the Difar stack, no, because it was a very complex stack, a very sophisticated memory stack, and that is only based



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on the fact that the other vendors that had built qualification stacks, none of them had qualified on the first time around.

Q In connection with these various qualification tests, were the environmental tests and electrical tests required to be performed in a certain sequence?

A Yes. It was designed in the memory specification and the qualification test plan was subject to our approval and we required that it be done in a sequence of electrical test, one of the environmental tests, an electrical test, alternating.

Q What was the reason for that sequential testing?

A To determine at the end of the -- well, to determine where the stack failed, if it did fail.

Q Were there any of these tests where the electrical test had to be performed within a certain minimum amount of time after one of the particular environmental tests was performed?

A Yes, the humidity test required that the electrical test-- the humidity test is where the unit is put in a temperature chamber for ten days and then when it is removed from the temperature chamber within so many hours it has to be electrically tested. There was a time limit and for the test plan, as I recall, that ISL had submitted,



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there were special arrangements made to put it in a plastic bag to retain the moisture until the electrical test was performed, but there was still a time limit based on it.

Q Do you recall why the special arrangements were needed?

A It was to insure that if humidity had resulted in condensation, that electrically that would show up as a failure and it was to be sure that there weren't any traps for moisture because in an actual military application, there can be high humidity areas and moisture entrapment resulting in corrosion and failure of the unit.

So, if the unit was left unattended for some hours, it could dry out and we would never even known if that moisture was there.

MR. MALONEY: I have no further questions, your Honor.

CROSS EXAMINATION

BY MR. McCONNELL:

Q What was the reason for these two trips you made to Barbados?

A It was to see the facilities that were there, the manufacturing facilities.

Q When you went down the first time, do you recall



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meeting with a Ron Keppel?

A Yes.

Q Was he the man at ISL who was in charge of the stack for this type of program?

A To the best of my knowledge, yes.

Q When you went back down the second time, after Plessey had taken over, was Mr. Keppel still there?

THE COURT: If you remember.

A I don't recall.

Q Do you recall who was in charge of the project at that time?

A My recollection is that it was Mike Boyce, but right now --

Q You are not sure?

A I am not sure.

Q Do you recall ever meeting with a Mr. Kavolious?

A No, I don't.

Q Did you ever tell Mr. Keppel that certain of the features of the ISL stack were superior to those of the EMI stack?

A Yes. As I recall, this was a personal opinion type comment, that the finger contents that are used to interconnect with the memory planes looked like it was better than EMI, but that was a value judgment. It was



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like the manufacturer had to decide if it was really easier to make, but it appeared from a user's standpoint better.

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THE COURT: Somebody has been doing a lot of scribbling on the blackbloard. Do you see that design on the right, two of them are circled and one is expanded to look like a finger. Is that what you are talking about?

THE WITNESS: Well, it is an interesting sketch.

THE COURT: You don't think you could establish it from that?

THE WITNESS: It is along the edges of the memory plane.

THE COURT: That is what that is supposed to be. It is copper, is that right?

THE WITNESS: Yes, the fingers are bent up and they connect. The rectangular shapes are bent up.

THE COURT Yes, that is what that is supposed to demonstrate. Is that the kind of thing you were talking about?

THE WITNESS: Yes, the difference, if I may, is that both companies, both ISL and EMI, used finger contacts, which we thought was really the best way to do it, but Plessey -- it was ISL, Ron Keppel, used a molded piece to hold these fingers where EMI had those same fingers



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bonded to a strip of material and the function stayed the same, it was just how it was implemented.

THE COURT: Any other questions, gentlemen?

MR. MALONEY: I just forgot one document here, your Honor. This is one of his trip reports.

(Defendant's Exhibit DY marked for identification.)

xx

REDIRECT EXAMINATION

BY MR. MALONEY:

Q Mr. Vangelakos, I show you Defendant's Exhibit DY for identification and I ask if you can identify that document.

A Yes.

Q Will you tell his Honor and the jury what that document is?

A It is a trip report that was made by myself and the manager of Magnavox quality control to the Barbados facility.

THE COURT: Is there a date on that?

THE WITNESS: The visit was from April 21st to April 23rd of 1971.

THE COURT: 1971, that was your second visit?

THE WITNESS: Yes, this was my second visit.

THE COURT: That refreshes your recollection?



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THE WITNESS: Yes.

THE COURT: All right.

MR. MALONEY: I offer it in evidence, your Honor.

MR. McCONNELL: Could I see it, please?

(Pause.)

MR. McCONNELL: I have no objection, your Honor.

THE COURT: All right, it will be received.

xx (Defendant's Exhibit DY received in evidence.)

THE COURT: I take it, then, there are no further questions.

MR. MALONEY: No,sir.

THE COURT: Thank you very much, Mr.Vangelakos. You are excused, sir.

(Witness excused.)

MR. MALONEY: We recall Mr. Gretton.

D A V I D G R E T T O N, resumed.

THE CLERK: You are still under oath, Mr. Gretton.

DIRECT EXAMINATION CONTINUED

BY MR. MALONEY:

Q Mr. Gretton, I show you Plaintiff's Exhibits 33 to 39, which are your monthly reports which have been introduced in evidence by the plaintiff.

MR. MALONEY: They are all in evidence, aren't



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they?

Q Referring to Plaintiff's Exhibit 33, Mr. Gretton, August 5, 1970, on page 6 there is an item (h) New Premises.

(i) With the heading "Extensions to existing plant."

It says:

"With an expected increase in the direct labor force from 300 to 500, it is essential that we improve our present canteen facilities."

And under subheading ii() "Additional production facility-the government has indicated that sites are available on a new industrial site at Wildey in St. Michael. However if we are interested then we should make an early application for a site."

Why was ISL interested in increasing its labor force and looking for additional space as of August, 1970?

A When I arrived in Barbados in June, I was advised by the marketing people and by Mr. Crocker and Mr. Clarke that within the next year it was anticipated that we would fill the factory on the Sea Well industrial site and that there was a possibility that, in fact, we could go to approximately 800 people in Barbados. To do that we would need a new building and I was asked to sort of



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investigate the various industrial sites on the island with a view to obtaining a new building.

Q Is it correct that as of August 5, 1970, everyone was still projecting a large volume in orders and increased business for ISL?

A The marketing people were forecasting that business was available, yes.

Q Referring to Plaintiff's Exhibit 34, which is your report, dated August 31, 1970, is that correct?

A Yes.

Q Page 2 under "Cableform" it says:

"Material to enable us to complete Cableforms manufactured during the latter part of July and the beginning of August finally arrived in the plant on August 24. We now find that we cannot ship to customers ahead of their schedule. We intend therefore to complete the order as quickly as possible, pack as per delivery schedule and deliver at the time specified."

Could you explain what that comment was intended to refer to?

A Yes. With the cable harness assembly in Barbados, I think we had something like 40 different cable harnesses to manufacture and the rate per week varied that Honeywell required, anything from 20 a unit to possibly a hundred of



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a particular unit.

These are short runs. What we wanted to do was, in fact, set up for one cable harness assembly, put the girl on that assembly and just let her work that assembly until she had sort of completed the order.

I had assigned Michalsky and Launius exclusively to the cable harness assembly area to try and sort this problem out and we decided that the best way to do it was to try and standardaize on X number of different Cableforms in one week, build those and then transfer over to another type of cable harness the next week.

What I found, though, was that Honeywell would not accept Cableforms ahead of their delivery schedule.

Q So that by August 31, 1970, we were actually building at least certain of the cable harnesses faster than Honeywell would accept delivery of them?

A That is right; yes.

Q Referring to page 3 of the report, it says "(c) visitors to ISL". Under that "(i)"Mr. David Williams, Plessey Brazil.

"Mr. Williams spent several days with us going over Cableform production, etc. He studied the Honeywell project in detail and also picked up the Univac request for quotation. We were able to assist in supplying time



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standards, etc. To enable Mr. Williams to quote Univac."

Did you ever have any discussion with Mr. Williams concerning his effort to obtain Cableform orders for Sao Paolo, Brazil?

A Yes, Mr. Williams spent a long time in the factory looking over the Honeywell specifications, quality requirements, etc. I think this was to enable him to be more knowledgeable when he went to Honeywell with Mr. Huntoon.

He came to the United States, visited quite a number of different factories with the ISL sales representatives, but was not able to obtain any business.

I had spoken with him about the Univac quotation after he returned to Brazil and he told me there was no business available in the United States as far as he could see for that product.

He also told me that on his visit to Honeywell that the business was not available. As far as he could ascertain, Honeywell had merged with GE, this is General Electric Company, on their computer operation and they were sort of in a hold pattern while they decided which particular computer product they were going to put on the market, whether it was to be run with the Honeywell computer system or the General Electric computer systems and



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he claimed they were not placing orders for Cableforms outside Honeywell.

Q With respect to item 2(b) "Production re-layout.

"During August I have signed purchase orders covering the cost of new work stations."

Now, would that item be referring to what we discussed yesterday, the plant layout, and would these be the purchase orders that you signed to obtain that work?

A Yes; that is correct. These were the purchase orders I signed with a company on the island. We brought over a chair and a table from Lisbon and had them copied in Barbados and got a local manufacturer to agree to build them to our specifications.

Q Do you have any recollection whether the figure of $26,942 was the total cost of that work?

A Approximately that, yes.

THE COURT: You don't know whether that was capitalized or expensed, do you?

THE WITNESS: I believe it was capitalized, your Honor.

THE COURT: You think it was capitalized?

THE WITNESS: Yes.

Q Referring to page 4, item 4, headed "Accounts.



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"The accounts department has been severely hampered by Mr. Hourihan's absence on vacation.

"Problems have been amplified by the presence of the auditors, who have been investigating the previous accounts in great detail, occupying our Mr. Fenty full time for several days.

"As outlined in my letter of August 17, 1970, Mr. Hourihan has been refused a work permit and is only expected to be given six days' stay in Barbados to clear his affairs on his return. A replacement for Mr. Hourihan is urgently required. Mr. Fenty is working extremely well under the circumstances, but at this stage does not have the necessary production experience. I suggest we arrange for an experienced Plessey account to come to Barbados on a two to three-month assignment, install the various Plessey procedures in ISL and develop and train Mr. Fenty in these procedures."

The work permit situation, would this item be referring to your testimony yesterday with respect to the Barbadian government?

A Yes, this is when I was summoned to an interview with Mr. Sam Hedley, who was I believe at that time the Undersecretary to the Minister of Home Affairs, and he advised me in rather strong terms in that interview that



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Mr. Hourihan would not be allowed to stay on the island.

Q To your knowledge had Plessey done anything to bring about this situation?

THE COURT: I don't know. I will sustain an objection to that question. I think we went into all this yesterday, didn't we?

MR. MALONEY: I don't think I asked that one question.

THE COURT: I am not going to let you ask that question. If you want to ask him what information he had as to why the Barbadian government didn't want this man to stay in Barbados, you can ask that, but not the way you have phrased it.

Q Would you answer the question his Honor has suggested?

A Yes. Mr. Hedley advised me that it had come to the government's notice that Mr. Hourihan had other interests outside of just being an accountant with ISL and was earning money from these other interests. He had a half interest share in the airport canteen. He was running a boutique on the island and he had some interest --

THE COURT: A good fellow.

THE WITNESS: And some interest in renting cars.



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THE COURT: The Barbadian government didn't like that?

THE WITNESS: As an expatriate on the island, you are assigned a work permit --

THE COURT: You can only do what it said?

THE WITNESS: It was assigned to the company and not to the individual and it spelled out rather clearly exactly what you were allowed to do on that island.

THE COURT: He said he was going outside the work permit and he would have to leave?

THE WITNESS: He would have to leave.

JUROR NO. 4: Over-zealous.

Q Turning to page 5, item 5 headed "Industrial Development Corporation", the first paragraph:

"The last week in August was designated IDC week and all factories were asked to cooperate by having an 'open-day' for one afternoon during that week. ISL held their 'open house' on the afternon of August 28th."

Going down to the third paragraph:

"During the week I had the chance to meet members of Parliament, TV and radio commentators, local suppliers, etc., and they all had the same comment to make, that is the poor image ISL has on the island. Mr. Tony Vanterpool, Public Relations officer for the IDC,



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suggested changing the name would help and indicated that the IDC would like to see the Plessey name in use. Once our new layout had been completed I feel sure we should go ahead and invite the Prime Minister, together with members of the IDC, to visit the plant, as was discussed in June."

b5

To what item did that item relate?

A I was advised that ISL had serious labor problems on the island going back to sort of 1968 and that the poor relations, in fact, the sort of industrial relations had received a lot of publicity in the local newspaper and in the local parliament.

Q What was the IDC?

A Industrial Development Corporation. I was advised by these people that if I ever really wanted to get anywhere on the island or if Plessey wanted to get anywhere on the island, we must set about dropping the name ISL as quickly as possible and getting the name Plessey into use. However, under the terms of the contract, we had to run with ISL, the name ISL (1970), and, in fact, we were not able to change the name to Plessey Memories until some time -- in fact, it took until about late 1971, early 1972 before the name change could be effected.

Q Turning to Plaintiff's Exhibit 35, is that



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your report, dated September 30,1970, Mr. Gretton?

A Yes.



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T4 Q Turning to page 2, on the cable forms.

"On September 24 Honeywellcancelled out the majority of the cable form orders. This cancellation has been made due to the cutback in work in Honeywell following the General Electric-Honeywell merger.

"During the month allegations were made that our cable forms did not meet Honeywell's quality requirement. These allegations, however, were proved to be false.

"Mr. Allsop is calculating the cancellation charges for this contract. These charges are expected to be fairly substantial because of the amount of work in process."

I believe we have --

THE COURT: You covered all that yesterday.

Q Looking down to Item 1, general comments.

(a) Output September. Going to the second and third paragraph:

"We took delivery of the Hewlett-Packard computer model 2115 and it has been used to great effect during the month. We have received a letter from Hewlett-Packard thanking us for our efforts in producing new stacks and turning around reworks."



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To what did that relate, Mr. Gretton?

A This was the 30-mil stack that I had been describing yesterday. And this was indicating that Hewlett-Packard in fact would write to us to us saying, thanking us for our efforts in attempting to clear up the quality problems we had with that stack, and they were beginning to see the effect of testing the stacks on the computer in improving quality.

The next paragraph, "Mohawk Data Sciences returned 15 per cent of our stacks for faults which proved impossible to find on our pulse test machine and could only be isolated by D.C. testing. New equipment has been ordered so that we can set up a D.C. test section and thus eliminate the possibility of despatching stacks with this type of fault. In the meantime we are carrying out low-voltage D.C. checking."

Do you have any recollection of what that item referred to?

A Yes. In Barbados we were taking the units directly from the production line and putting them into the test room without any form of electrical inspection. We were only giving them a visual inspection. This was wasting time on the testers because simple faults that were caused by mis-soldering of wires were taking up tester time to find.



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zp3 Gretton-direct

Also with this particular Mohawk stack. The way we were testing this unit, we were testing this unit, we were looking at the outputs in series so we would look at output No. 1, switch to output No. 2 and then switch to output No. 3. When this unit was used in a computer, all outputs are looked at simultaneously. And what was happening was we were getting interference from one channel to the next. Our tester was not capable of finding this. So I have to come up with some way of checking for this particular fault outside the test room. At the time this report was written, we did not have suitable equipment to make that type of test.

Q Did you attempt to obtain such equipment?

A We did, and we obtained that equipment. And instituted this type of test on all units, in fact.

Q Turning to page 4, Item 4, headed "Quality Problems."

"A 'quality task force' has been set up to improve the quality and workmanship of the memory products we manufacture. This team takes a product line at a time, brings the quality up to an acceptable level, and then moves on to a new line. However, they move behind an audit inspector who continuously monitors the quality of that line reporting directly



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to the task force. This force has only been in operation for two weeks, but the results that have been achieved are very positive. The quality of the Hewlett-Packard and Mohawk lines have improved considerably, so much so that we have had several Mohawk units pass at first test.

"The progress of this team will be monitored very closely."

Could you explain what the quality task force was?

A Yes. We found at this stage that we had too many problems, too many quality problems on the shop floor and we were not able to focus on all of them at one time. So it was decided that we would pick out our best inspectors, the people that we really knew could look at the unit and knew whether it was good or bad and put them on one product line at a time. On this product line they would monitor the actual people who were doing the work, who were stringing the cores. They would also monitor the inspectors because what we found was some of our inspectors were missing too many faults, so they would look at the unit, they would claim it was acceptable and pass it on to the next stage of operation. So, in fact, we were inspecting inspectors. And trying to upgrade our inspectors so that faults were



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being caught as soon as they were being made and not getting right to the process and taking a lot of test time rectifying faults or finding faults that should have been caught after the very first operation.

Q Was there any such system when you arrived at Barbados?

A Not at all.

Q Referring to --

THE COURT: How many people were working in this plant at this time when you made this --

THE WITNESS: 360, I believe, to 400 people.

THE COURT: How many testers did you have working in the work force of 360?

THE WITNESS: We were averaging one inspector to ten employees.

THE COURT: That would be about 36 inspectors?

THE WITNESS: Yes. Then there was a quality --

THE COURT: How big was the quality team?

THE WITNESS: The quality team we had to build up. It grew to approximately ten people. This particular quality team involved possibly one quality supervisor, local Barbadian, a young man who had been with ISL and was progressing very well under Mr.Boyce, and probably two of the top inspectors.



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THE COURT: How did you receuit your testers, from the employees who seemed to you to be most efficient?

THE WITNESS: Yes. We tended to -- in the first instance, yes, we would probably take the most efficient inspector. That in fact was the wrong way to go because you ruined -- we take the most efficient assembler. That was the wrong way to go because you, in fact, ruined your assembly force. And we found that if a girl was a goodassembler, she did not necessarily make a good inspector. And so we tried to come up with taking advice, I think, from line supervisors, leave people as to who they thought, if they had anybody on the line, would they make a good inspector and then we put them through a training period with Q.C. monitoring them during this training period to see if they were good. If we considered them not to be good, we put them back on the assembly line.

THE COURT: When you arrived there, you did not have this inspection team as you described. What was the inspection team when you arrived?

THE WITNESS: The inspection when I arrived worked for quality control. There was a group of people working for quality control under Mike Boyce that were independent of production and were assigned to a particular product line. But not working what we came up



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with here, and this was in discussion with Mike Boyce and Ballantyne and some of the production people. We came up with this, you know, top-class inspectors where we could sort of move anywhere in the factory and we focussed them on a line at a time rather than try and cure all our faults at one go. We were just getting swamped and we just could not cope.

THE COURT: All right.

Q Turning to Plaintiff's Exhibit 36, which I believe is your report dated November 4, 1970.

A Yes.

Q Turning to page 4, Item 3, Cost Control.

"A pilot cost control scheme is to be installed on one of the production floors during the second week in November under the control of Mr. Allsop. We have had several meetings on the subject and have received a lot of assistance from Mr. Cuthbertson, work study engineer from the U.K. Mr. Allsop is preparing a report detailing the workings of the proposed system."

Would you explain to his Honor and the jury why you were setting up a cost control scheme?

A In June when we started looking on to the production floor, getting on to the production floor to



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find out exactly how costs were monitored by ISL, there was no definitive cost control scheme in operation. Therefore, it was very difficult for any of us to know exactly what efficiency the plant was running at. This was one of the reasons why we were possibly a little slow in responding to some of the price build-ups because I was being given times from the shop floor and told that operators were running at 70 or 80 per cent efficiency. When I actually went out on to the shop floor and said, "Show me how you are getting that," there was no documentation proving that an operator was running at 80 per cent efficiency. And so, the only way to run a factory, that I know anyway, is to have cost control operating in that factory so that you can calculate to the last cent exactly how much it costs you to run, to build a particular unit. And John Allsop, who was -- had been handling cost control for Plessey for several years, came over in September and his first task was to put a workable cost control system on to the shop floor. It had to be simple because we didn't have a computer and also thepeople, the work force had had minimal education.

THE COURT: All right, we will take our morning recess.

(Recess.)



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zp9 Gretton-direct

(In open court; jury present.)

MR. MALONEY: Your Honor, we would like to interrupt Mr. Gretton. We would like to call Mr. Richard Œndron.

THE COURT: All right, if Mr. McConnell has no objection.



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zp10

R I C H A R D  G E N D R O N, called as a witness on behalf of the defendant, being first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. MALONEY:

Q Mr. Gendron, will you state your full name and address for the record, please?

A What?

Q Would you state your fullname and address for the record.

A Richard Jendron. My address?

Q Yes.

A 993 Candlewood Road, Brentwood, New York.

Q How are you employed, Mr. Jendron?

A Traffic manager for Plessey Electronics Corporation.

Q How long have you held that position?

A Three and a half years.

Q Do you recall the approximate date when you joined Plessey Electronics in that position?

A It was July 2, 1970.

Q In connection with your duties as traffic manager, didyou have occasion to become involved with the shipping of materials to the plant in Barbados?



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zp11 Gendron-direct

A Yes, sir.

Q Could you explain to his Honor and the jury what those procedures involved?

A Well, the material was purchased by our purchasing department from domestic --

THE COURT: Where were you located at that time, sir?

THE WITNESS: Farmingdale.

THE COURT: You were at Farmingdale, New York?

THE WITNESS: Yes, sir.

THE COURT: All right.

A (Continuing) The material was purchased at the request of ISL from our local suppliers and material was shipped to us in Farmingdale and we would package it and ship it down to our forwarder at JFK Airport and we would arrange to forward it onward to ISL.

Q Who was the forwarder to which you referred?

A Well, in July, the forwarder was Barnett International who was located in New York. In September, the same year we changed the broker to Harlow Air Cargo Brokers who were located at JFK Airport.

Q Mr. Gendron, I show you Defendant's Exhibit DS for identification and I ask you if you can identify that document?



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A Yes. This I made up showing invoice numbers, dates shipment dates, air label numbers, cartons and the item quantity that was on each shipment.

Q Who requested you to prepare that document?

A Well, my employer, Mr. Clarke.

Q Mr. Clarke?

A Right.

Q Would you explain to his Honor and the jury the procedure you followed in preparing that document?

A In preparing this document I took my file showing the invoices that I had generated for the purpose of export, showing the amount of pieces, part number, suppliers' name, quantities, serial numbers where it was appropriate. Quite often, it was material from a customer that had to be repaired and we would show a value on it and its serial number on it and the invoice also showed a total amount of pieces and weight for the benefit of the broker when he prepares his export papers, he knows just what he has. Say five cartons, 150 pounds. From this he made the export shipment on our behalf to ISL.

MR. MALONEY: I offer the document in evidence, your Honor.

MR. McCONNELL: No objection.

THE COURT: It will be received.



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xx

(Defendant's Exhibit DS received in evidence.)

MR. MALONEY: I have no further questions, your Honor.

MR. McCONNELL: I have no questions.

Wait a minute, just a minute. Excuse me.

CROSS EXAMINATION

BY MR. McCONNELL:

Q Mr. Gendron, do you know why there was a change from Barnett to Harlowe?

A Yes, sir. When Barnett was handling our export, their offices were in New York City and the freight would be delivered down to their airport office but in order for them to initiate export paper work, our invoices had to go into Manhattan, so because of the time difference in mailing the documents into Manhattan and the simple procedure of getting the freight down to the airport, there was sometimes delays of two, three days. So in order to get around this, I changed the broker to a broker who had an export office at the airport.

Q That was Harlowe?

A That was when we changed to Harlowe in September.

Q Can you tell from your summary sheet which was just introduced in evidence what material or supplies was



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actually shipped?

A Yes. Not from that summary sheet, no. But from the rest of the documents that are corresponding to it, our invoice is attached to it to show each item and its value. Quantities and its value.

THE COURT: I guess your question is your records would show that each item on this list was in fact shipped?

THE WITNESS: Yes, sir.

Q But the summary simply shows the shipments, right?

A Right.

Q But not what was shipped?

A Yes, sir.

Q Did all types of items shipped down to Barbados require a license, do you know?

A Just about all of it.

Q Would that be true in the case of wires?

A Oh, yes.

Q And cores?

A Yes, sir.

Q And semi-conductors?

A Oh, yes.

Q And printed circuit boards?

A Yes, sir.



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MR. McCONNELL: That's all.

THE COURT: Any other questions?

MR. MALONEY: No, sir.

THE COURT: Thank you, Mr. Gendron. You are excused.

(Witness excused.)

D A V I D G R E T T O N, resumed.

BY MR. MALONEY:

Q I believe we were on Plaintiff's Exhibit 36. Had we finished with the Item 3, cost control, on page 4 of that report?

THE COURT: I thought you had finished with it. I thought he testified about that.

A Yes, sir.



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T5

Q Turning to Plaintiff's Exhibit 38, page 2, under the heading "Visitors to ISL," and there are two little "i's":

"Mr. J. Kavolious. Mr. Kavolious carried out a full investigation in the Magnavox project and it was decided to transfer this project to Boston. We had been experiencing considerable manufacturing and basic design problems with this stack; therefore, it was felt that the only chance we had of completing the units was to effect a complete transfer of the project to Boston, where the engineering department would be able to monitor progress 100 per cent."

Could you explain to what that comment relates?

A Mr. Kavolious was a mechanical engineer who had been hired by Frank Parr in Boston around August. As I became more and more familiar with this Magnavox project from the period June through to November, I found more and more problems with it.

It has been testified this morning we were attempting to build a new stack that had never been built before to a completely new design. The drawings were not formalized for this particular stack, and, in fact, although we had the basic plane designed, we were not really sure



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how we were going to fasten the finger frames that Mr. Vangelakos had mentioned this morning on to the aluminum heat sink.

Also, as I got more and more into it, we were not really sure how we were going to test that unit on this C.T. tester.

I understand that Allen Jones, from Towcester, had been to Barbados in April, May of 1970 and had a first look at this particular plane and decided that Plessey had a test jig that they would be able to use for testing this particular plane.

Q Who was Mr. Jones?

A Mr. Jones was the chief engineer for Plessey memories.

Q I don't know whether I ever asked you to explain what a test jig is.

A A test jig is a device for making connections to a plane, a memory plane, to enable it to be tested on a stack or plane tester. It is rather complicated, with a lot of wires, a lot of pins, and a lot of metal work.

This particular test jig was delivered around August into Barbados. It didn't work.

By August I had also had a good look in the test room and I was under the opinion that the winter



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engineering jigs that ISL was using were far superior to Plessey's jig, so we immediately ordered a Winter engineering test fixture, but this really didn't solve our problems. We were now able to test the plane, but when we came to stack the plane we found we were having problems making connections with terminations, and also this particular stack is very, very complicated, you fit a lot of core and wire into a very small area.

Q How many planes had to be stacked for the Magnavox?

A I believe it was 16 planes, so that you had a core on each side of the plane. This is how it came (demonstrating) 82 x 32, so you had 16,000 cores on one side of the plane, 16,000 cores on the other, and so on down the sandwich.

When the core became subjected to electrical pulses they generate heat, you have to get rid of this heat, and the original design for the ISL plane meant soldering or making a solder connection between these particular planes, so that heat would travel through the stack and be uniform throughout the stack, so you would not have a heat spot in any particular area.

The design on the plane stack looked very good, but when we came to stack it we found, yes, we could put



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the planes together, but if there was ever a fault in the stack it would be impossible to take apart and, of course, we knew that we would break a core, we would definitely break a wire, or some sort.

So I began to find all these problems as we went on in the project.

Also, Mr. Vangelakos has testified that we had to perform certain tests. My feeling was it was no use performing these tests right at the very end. You had to perform some of them along the way. We had no test gear, environmental test gear in Barbados.

We were talking about modifying things, like pressure cookers to get altitude and an environmental chamber to perform environmental testing within the chamber, but as I looked more and more into this project it was becoming more complicated. It had not been thought out to the very end. We were meeting design problems all the way along. We would get to one stage, but how do we go further?

In the end I got hold of Frank Parr. I said, "Look, send an expert down from Boston and come have a look what we are doing. Let's see where shall we go from here."

We discussed this problem with Kavolious, who



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had been in the core industry for some years with RCA, and it was decided at the end of his visit that the only way we would ever salvage this project was to transfer it to Boston, and the decision was made at the end of his visit, yes, we would transfer the whole project to Boston.

Also, we would transfer this C.T. tester into Boston so they could perform the electrical test at Boston.

Q Was Mr. Kavolious assigned any responsibility for the project?

A The mechanical responsibilities that Mr. Phil Wood had. He worked closely with Mr. Wood and Wood went to Boston to hand over. We also hired Mr. Eric Ormandy from Ferroxcube. Now, he had been involved with the Magnavox project at Ferroxcube. He was hired as quality control in Boston and was assigned responsibility for the quality control documents in the Boston area.

Q Now, I understand that Mr. Kavolious and Mr. Ormandy were both stationed at the Boston facility?

A Yes.

THE COURT: At the time you made this decision did you have any delivery schedule with Magnavox as to when you were supposed to do it?

THE WITNESS: No, your Honor. In June I couldn't even find a purchase order. It was very difficult to find



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out from the people in Barbados exactly where we were on this particular project. This is why I contacted Mr. Parr, who, in turn, got John Grey, the representative, to contact Osborn, and we said this is what we think we ought to be doing and this is what we are doing. We have the one unit we are attempting to qualify.

We also advised Mangnavox that we had the other four units in production that we bought material for at least three of them and we were progressing with production. Hence the letter from Mr. Osborn saying, "Stop everything." And this is where we sort of clarified around that time exactly where we stood with Magnavox, and we were able to get copies of the various trip reports that I had not seen before, and I don't know that Mr. Boyce or Mr. Ballantyne had seen, before outlining the faults Magnavox had found with the ISL facility when Vangelakos had come to the facility in April of 1970.

We then found at that stage we had to assign a special area for the production of this Magnavox project totally independent and isolated from any other area in the production floor. We had to set up special incoming inspection routines for all the material on this project. Certain items had a shelf life and we had to make sure that we adhered to the specifications Magnavox was laying down.



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We went into it in great detail and found they had very, very tight specifications on the materials that they would allow to be put into this particular project.

I felt that we could string the planes in Barbados, but that was all at that time. We just didn't have technical expertise. Our girls were not experienced enough to put the stack together and perform the rest of the task.

Q Were you ever able to qualify a prototype by the end of the measuring year?

A Not by the end of the measuring year.

Q If you recall, when did you first build a prototype which was submitted to the quality test which Mr. Vangelakos describes?

A We built a series of planes during 1971. They were put into a stack to give us experience of actually putting the stack together, taking it apart. That was run in a tester; it ran okay.

Then in 1972, January, we built a further series of planes in Barbados under the direct control of Magnavox. We had Magnavox representatives sitting with us the whole time. These planes were then sent to our new facility in Santa Ana, California. They were stacked again under Magnavox control. The prototype was finally delivered to



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Magnavox and it worked. It did all the electrical tests and then failed on the salt spray and humidity.

It appeared that we away back had been delivered a tube of wire. This wire was used in stringing the cores, a very thin copper wire with a polyurethene coating and then a nylese coating on top of the polyurethene. It turned out this one tube we had not checked, we were supposed to but we had not, and it didn't have the nylese coating, and when the unit was subjected to humidity, the polyurethene broke down and exposed the copper, and the unit failed, and at that stage we decided we spent too much money, there wasn't enough left in the project, and we called it a day. By that time we got all the drawings qualified, everything.

3 THE COURT: This was in '72?

THE WITNESS: This was in '72, yes, sir.

Q What is the date of Plaintiff's Exhibit 39?

A February 4, 1971.

Q Returning to Plaintiff's Exhibit 39, page 4, at the top of that page it says disposal of production cables, et cetera. You stated we realized $5,517 U.S. dollars in connection with the disposal of the old work benches.

Do you recall if that figure was correct?



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A I believe so, yes.

Q Mr. Gretton, did you experience any problems with respect to the recruitment of labor at the facility in Barbados?

THE COURT: When are you talking about? When he arrived?

MR. MALONEY: During the measuring year.

THE COURT: During the measuring year?

THE WITNESS: Yes, we were beginning to find it difficult to get good quality labor mainly because of the location of the factory.

Bridgetown is the sort of focal point of Barbados. The island is pear-shaped. Bridgetown is at the bottom lefthand corner and has seven main highways going out. We were on the bottom highway, No. 7, at the airport. There was no immediate village around the airport where we could pull a labor pool.

Girls who lived three or four miles north of the airport, if they wanted to come to the factory either had to walk the three miles directly south or catch a bus going to Bridgetown, get on another bus and come back out to the airport.

With the build-up and the industrialization of Barbados, more and more factories were being set up in



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the Bridgetown area, and so we found that girls couldn't really be bothered to come to work for ISL-Plessey, it was much easier for them if they just had to make the one bus ride.

Also, we had no real canteen facilities in the area. There was an airport canteen, but that tended to be rather expensive. Our own facilities were very poor, and there was no way of expanding the canteen unless we took production space within the factory.

THE COURT: You mean it was difficult for employees to find a place to eat and the eating facilities were not good at the plant?

THE WITNESS: No, there was certainly nothing like sufficient eating area for 400 people, and as more and more factories came into Barbados, nobody came to this industrial estate that we were on.

In fact, some time in 1970 the government put a ban on any further building on that estate because they had a group of Canadian consultants on the island discussing how to expand the airport and, therefore, they claimed that in case the recommendation by the Canadians was that we need to expand the airport, we need more land, it would restrict facilities at this industrial estate we were on to the one building.



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Q You first arrived in Barbados in June, 1970. To what did you direct your immediate attention at the factory?

A When I arrived in Barbados there was a Mr. Lewis, Mr. Parr, Mr. Sweeney and a Mr. Hewitt already in Barbados.

I went with Mr. Hewitt exclusively and tried to find out from him as quickly as possible how he had been running the factory from an operations point of view. We went into the factory layout, the material control, the shop floor scheduling.

We left Mr. Lewis, Mr. Sweeney and Mr. Parr to go through the order book and to try and come up with an order book, because we were not really sure. There had been a lot of talk about two million, three million dollars worth of orders on the books, but the shop floor program that Peter Hewitt was using didn't show that type of volume.

MR. MALONEY: Your Honor, we introduced in evidence an Exhibit CK, which was a comparison of Mr. Kovar's 1969 sales projection, Mr. Tucker's 1970 bookings forecast, and the orders listed on Mr. Kovar's memorandum of May 26, which is Defendant's Exhibit AH.

I would like to mark for identification Exhibit CK-A, to which we have added an additional column.



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THE COURT: You better make it CK-1.

xx (Defendant's Exhibit CK-1 marked for identification.)

Q Mr. Gretton, I give you a copy of Defendant's Exhibit CK-1 for identification and also hand you Defendant's Exhibit CT in evidence, which is the shop floor program that we discussed on prior days. I would ask you if you can explain to his Honor and to the jury what the figures are appearing in the column headed 5 of the new exhibit?

A Yes. Taking the shop program which covered the week ending the 5th of June, 1970, taking the column which says "Total Outstanding On The Order Book," we have taken the numbers appearing in that column and added them to the number of units that had been shipped the previous week, so that, for example, on the top we had a customer called Compat, week ending the 5th of June, 1970; we had shipped four units; left on the order book were 28 units; 28 plus 4, 32.

I took the purchase order for the Compat units, got the price, individual price of the Compat unit, multiplied it by 32 to give the total that appears now in column 5 of the new exhibit.

Q Did you follow a similar procedure with respect to each of the customers for which there is an amount



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entered in column 5 of the exhibit?

A Yes, I did.

MR. MALONEY: I offer it in evidence, your Honor.

MR. McCONNELL: No objection.

THE COURT: It will be received.

xx (Defendant's Exhibit CK-1 received in evidence.)

Q Based upon the calculations which you made for each customer, what did you find to be the total outstanding orders on the order book as of June 1, 1970?

A They total $787,423.

Q In referring tocolumn 4, which is the total of orders which were listed on Mr. Kovar's memorandum of May 26, 1970, in the amount of $1,336,307, I take it that the difference between those two figureswould represent the unreleased orders?

A I assume so, yes.

Q Now, referring to AIL Division of Cutler-Hammer, the $22,704 order on Mr. Kovar's memorandum, was any part of that order released as of June 1, 1970?

A Yes, it was. We qualified a prototype.

Q As of June 1?

A I am sorry. No, June 1? There have been



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no releases against that order.

Q Did AIL subsequently make releases to ISL during the measuring year?

A Yes.

Q Did we deliver the entire amount of that order during the measuring year?

A We released part of that order, yes, during the measuring year.

Q With respect to Collins Radio, I believe there was some testimony during the plaintiff's case referring to Defendant's Exhibit CT, the shop floor program, Mr. Gretton --

A Yes?

Q -- would you look at page 2, under Collins, the dates February 2 and March 10 appear in the problems column.

Now, would you explain to his Honor and the jury what those dates indicate?

A They state or indicate that Collins required delivery of those units in February and March, 1971.

Q So although the orders were released as of June 1 by Collins, they didn't want to accept delivery until those dates?

A Yes, and, in fact, they kept on extending and extending that particular release, and we finally got them



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to agree to take those units in 1972. That anything appearing in the problem column for delivery was future delivery. If we had been in arrears, they required delivery in February or March, 1970, then it would have appeared in the opening arrears column.

This document is standardized again throughout the Plessey memories facilities, so it enables people like Mr. Crocker, who travel around a lot, to be able to walk into any particular factory, pick up the document, and understand it immediately.

Q Going in alphabetical order, the next customer, Compat, showing the release of $18,080, did we complete and make delivery of that entire release during the measuring year?

A Yes.

Q Did we make attempts to make Compat to make further releases to us?

A Yes, we made modifications to that circuit board as they asked us to, but even after doing that they would not give us any further releases.

Q Did you experience any difficulty in collecting payment from Compat with respect to the deliveries which were made?

A Yes, I believe we did. As I understand it,



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the original Compat order was placed at the 1000-piece price. They released 46, never released the other units. We had billed them originally at the 1000-piece price. However, when we finally got a cancellation or word from Compat that there were no more units to be delivered on that order, we immediately re-billed them at the 50-piece price that had been quoted by Mr. Kovar. They disputed that, and I am not really sure how we resolved it, but they refused to pay the bill.

Q Now, referring to the next customer, Datacraft, it indicates that there was a release of $84,450. Referring to the shop floor program, Exhibit CT, what was the status of that order as of June 1?

A As of June 1 it was 303 units outstanding. We had shipped 30 units the previous week. So as of June 1 I should say there was 308 units outstanding on that order.

Q And with respect to the 308 still outstanding on the order book, can you tell us how many were in arrears?

A 308.



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Q In other words, the entire order had been released and was in arrears by June 1, 1970?

A That is correct.

Q Do you have any recollection of how that situation had come about?

A This was a small unit that we were stringing for Datacraft. We were just assembling the core. I believe, in fact, we had received the cores already on setting tape. Our girls would just put the wires through, terminate them and we would send them down to Datacraft who had set up a facility in Bridgetown, in the very center of Bridgetown, where they were hoping to and in fact have established a core stringing facility.

When I got into this it would appear again we had terrible quality problems. Datacraft were not at all happy with the way we were performing.

They supplied all the material. We carried on, as far as I can recall, delivering against this order for some time into August when we were put on hold by Datacraft because of the poor quality. At that stage we took an inventory of materials that were allegedly in house at the time that had been supplied from Datacraft and we were a lot short, particularly core.

I was informed by ISL employees, people who had



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been with ISL prior to June, that, in fact, that core had been used on other projects.

Q This was core that belonged to Datacraft and should have been used for Datacraft?

A Should have been used for Datacraft and, in fact, had been used on other projects.

We finally resolved the issue with Datacraft some time in 1970 when we paid them a sum of, I believe, $3,000 for the material that we had not been able to locate but they could prove by invoices they had supplied and had been received at ISL.

Q Now going to Hewlett Packard, I think we have already discussed at length the $302,664 figure for released orders, which was the 228 units of the 30 mill stack at $1,190; the 36 units of the new 22 mill stack at $733 and there was, apparently, a small order for diodes.

I believe I questioned you yesterday concerning the problems ISL was experiencing with the 30 mill stack for Hewlett Packard. Can you tell from the shop floor program how many of the 36 released units on the 22 mill stack were in arrears as of June 1st?

A 12 were in arrears.

Q Do you recall what the problems with that order were?

A This particular unit was what is known in the industry as a folding stack and in fact we had to string core on four separate boards and then fold these boards together to form a very small stack that was probably only half an inch high.

Q Would these boards be the printed circuit boards that you were describing to us yesterday?

A Similar to the one I have been describing, yes.

We were having trouble, Hewlett Packard were having trouble and their ultimate supplier was also having trouble with this particular unit. As you can see from the shop book program, as of June 1st there were ten of these units already in work. The first five that were delivered were all returned to ISL scrap because they did not work.

When we opened them up, we found -- to have a look at why Hewlett Packard had rejected them -- we found a vast amount of splices.

When you are manufacturing these stacks, the girls string the core, they go to test. If they find that the test fails for a particular reason, a core or whatever, you have to remove the failure core.

To phrase it another way, when you send out the stack, if it has 16,000 cores, all 16,000 must be



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perfect so that you have to take out a core, to do that you have to cut the three wires that go through the core, pull the wires back, take out the core, put a new core in, rethread the wires and make a splice so you have now rejoined the wire.

It is normal practice to limit the number of splices in any particular core stack because they are a source of unreliability. There is an extra solder joint and a solder joint which is considered to be a weak link in the system.

On some of the units we got back, we stopped counting, according to the control people, at 250 splices. On a unit of that size we would only expect to ship a unit with approximately 50 splices in it, that was all.

This particular unit was a source of problems and we had to develop our techniques how to string this unit. As I said, if you have four boards laid out and of course the problem was to line the boards up on a jig so that again if the girl put the needle at one end, as she passed it through, it would pass through all the core on that one plane fairly simply without her having to juggle as she went from one board to the next. We had a lot of mechanical engineering to do to come up with suitable core jig and holding jig to enable the girls



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to string this unit efficiently.

Q To your knowledge had ISL ever built a similar unit for any other customer?

A I don't believe they had, no.

Q Do you recall whether any other vendor was supplying Hewlett Packard with the stack other than ISL?

A I went to Hewlett Packard in May, 1971, and was shown examples of their own production and also, I believe, of Fabritech's there.

Q During your meetings with people at Hewlett Packard, did you discuss with them the problems you were having and any problems they may have been having?

A Yes. They indicated that they too were having problems stringing this stack in Singapore and we tried to get together with them to find out how they were overcoming their problems, but again they seemed reluctant to release to us their jigs and their techniques, their exact techniques of how they were performing the stringing of this stack.

It was very difficult. We never did meet time standard on this stack and I think the price was $733, which works out .52 cents a bit and for that stack and at that price it was very, very cheap and I believe we lost a lot of money making it.



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Q Turning to Honeywell and on Mr. Tucker's bookings forecast, Exhibit CJ, he had broken down projected orders for various Honeywell institutions or installations or plants including Boston, Framingham, Lawrence, San Diego, Toronto. Do you have any recollection of what product we were making for those installations?

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A We only to my knowledge built two types of memory units for Honeywell, both very small, very simple units, so that inthe main these particular people all took the same unit.

The complication was that -- and I am not too sure of the locations -- but I believe San Diego supplied material for the job, Toronto supplied partial material for this particular job and one of the other locations didn't supply anything. So, we were carrying all these orders on the order book, but there was confusion as to whose material was whose. We found that it had been sort of mixed. The material from San Diego was being used to manufacture the stacks for Toronto.

I believe Mr. Koegel has a photograph of that particular stack, if it would help.

Q Do you recall whether or not we were experiencing any quality problems withrespect to the production of this stack?

A We had a very high reject rate soon after I took over there. In fact, I believe we got something like 300 units back from Toronto.

When they were inspected, we were able to ascertain that they had been shipped prior to May of 1970 and they had not been cleaned correctly with the result that the flux that is used to assist in the soldering operation had been left on the terminals. This flux is slightly acidic. If it is left on the unit it gradually eats into the copper and causes a malfunction within that unit.

All 300 came back for this particular fault, that they had not been cleaned properly and, therefore, had become defective over the sort of three or four months that they had been used out by Honeywell.

Q Who was responsible for performing the tests to prevent that from happening before the product was shipped?

A Quality control was supposed to monitor the cleaning. The production were following instructions in cleaning the product at the end of the production operation.

Q These are the same employees that were there before Plessey assumed management control?

A Yes; that is correct. On that unit as well

we also had a lot come back for a sense amplify failure. I got involved in this particular problem personally and found that they weren't even testing the sense amplifier and we, therefore, had to come up with a design for a black box that we could attack to our particular testers so that this component, this sense amplifier component, could be tested prior to shipment to Honeywell.

Q With respect to the various released orders for Honeywell, do you recall whether or not we built and delivered those orders during the measuring year?

A We built all but one. This ultimate unit that we were making for Honeywell that appears on page 2 of Exhibit CT and is listed as a 20083. That was shown as released, but, in fact, we were gearing up to produce sample delivery in September. We put those units into production only to have that cancelled by Honeywell, but the other units, yes, we producd and we carried on producing right through until 1972.

Q I believe I asked you about Mohawk Data Sciences yesterday, did I not?

A Yes, sir; that is correct.

Q With respect to the figure of $25,490 released as of June 1, 1970, do you recall whether or not obtained further releases?

A I believe we obtained further releases, yes.

Q Turning to Micro-Systems, do you recall whether ISL was experiencing any problems with Micro-Systems during the measuring year?

A My recollection is that we had -- I am looking at this document CT -- is that by June 1st we already had four in the shipping area, held for shipping, with 65 unreleased.

We subsequently learned that we were having a lot of problems or had been having a lot of problems with Micro-Systems for quality problems with this particular unit and I remember this because in 1971 I came to the United States in May and toured all our customers and Mr. Julian Sanchez, who I believe was the operations manager of Micro-Systems, took great delight in showing me. He welcomed me with "Ah, you're the man from ISL, are you? I've been waiting to get my hands on you."

He showed me units that had been made by ISL and that, of course, had never run in the Micro-Systems computers. They refused to do business with us.

Q These four units that are indicated in the held for shipment column on Exhibit CT had been built and prepared for shipment prior to Plessey's assuming control; is that correct?



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A That is correct. That is what is indicated by this document.

Q With respect to Nuclear Chicago and Nuclear Data, do you recall experiencing any problems with them during the measuring year?

A Not really, just the normal production problems. Both Nuclear Chicago and Nuclear Data supplied connectors for their particular stacks. They were unique to these particular stacks.

The problems we had was that they would regulate our production by holding up delivery of their connectors and so it was a little difficult to deal with in tha we would get items in production based on an agreed production schedule only to find that they would keep us very tightly regulated by the customer furnished materials that were supplied on the project, but we carried on, again, with Nuclear Data, particularly, right through until 1972 delivering stacks.

Q Singer Librascope, $47,500, I believe I asked you about that yesterday?

A That is correct.

Q Indicating that we shipped that all out?

A That is correct.

Q Sanders Associates shows releases of $1,900. Do



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you recall whether or not that order was shipped during the measuring year?

A That was shipped. Again they were another customer that supplied customer furnished material and I know from my monthly reports, just looking through them, that they were continually after the reps to go to Sanders and get the customer furnished material.

Again, although they would give us a release, they would not supply the customer furnished material against that release to enable us to build the unit, but we did build, I believe, that amount of units through the measuring year.

Q With respect to Standard Logic, the order of $63,481, do you recall whether there were any problems with respect to that order during the measuring year?

A Yes. Standard Logic were claiming that the product we were shipping was bad quality. We were able to prove that, in fact, Standard Logic, when they got our memory planes, were, in fact, opening them up and performing work on them themselves and it was our impression that they hadn't realized that these memory planes were particularly fragile and I felt anyway they were damaging some of the planes.

Also, we had difficulty with Standard Logic,

they would not pay. They were very poor payers and this went into a dispute and I think litigation was started against Standard Logic and they finally agreed that, yes, they would pay us,but it was only something like a thousand dollars a week or a month or something ridiculous like that, but we completed that order for Standard Logic.

Q You refused to take further business from them?

A We refused to take further business from them until we resolved the amounts they were owing. The problem here again was, of course, they had been sending returns back, but for some reason that I was never able to ascertain Hourihan had stopped issuing debit and credit notes following the Plessey takeover and so it became a horrendous problem for Mr. Allsop to try and sort out the accounts of companies like Standard Logic, Standard Memories, Hewlett Packard where we had had a high reject level and Mr. Allsop, in fact, ended up in 1971 during the measuring year coming to the United States and spending several months visiting customers, taking the ISL records and trying to reconstitute the accounts and then coming to an agreement with the various customers over who owed what amount of cash.



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Q And generally during the measuring year did you experience difficulty in collecting the accounts receivable?

A Yes. Simply -- I believe money was tight. Barbados was 4,500 miles away from the United States. If we wanted the cash, we had to phone them and we were so far away nobody seemed to want to -- nobody bothered with us. We spent a lot of money chasing the accounts. We got -- in the end we had to sort of get the sales reps almost to become debt collectors.

Q Did this problem in collecting of receivables lead to problems with respect to the payment of commissions to the sales reps?

A Yes. It lead to almost the statement in the end, if you want pay, you will have to help sort the account out so we can get money to pay you. This was the problem that had been highlighted, I believe, in December by Mr. Tucker when the reps were not getting paid. We didn't have the cash coming into Barbados. We couldn't release cash, American dollars from Barbados, to pay people in the United States until that money had flowed through the exchange control. We were not being paid. So tha we had to use the representatives' records, the customers' records, whatever records we could find



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down in Barbados, go to the customer in the end, sit down with him and try to sort out the accounts. But this became a major problem, the cash problem.

Q How were you able to purchase materials during the measuring year if you were having this cash --

A It was purchased in the Unites States by Plessey Boston, Plessey Memories in Boston and they would invoice us and it was just a paper invoice. There was no cash moving out of Barbados. This ended up in the accounts at the end of the year as a hundred thousand dollars being owed on an intercompany account. We finally, in 1971, late '71, early '72, we went to the exchange control authorities, in fact, and received permission to transfer -- we got permission thatwe would not bring the accounts receivable, this cash back into Barbados. It amounted to a sum of, I believe at that time outstanding $365,000 that should have been brought back into Barbados that Barbados wanted because it was their exchange control people that required it.

Q You say it was just a paper invoice to Barbados. Was someone paying the suppliers?

A Plessey was obviously paying the suppliers. With cash in the United States.

MR. MALONEY: Your Honor, we have a short bit

more with Mr. Gretton. Perhaps we could adjourn for lunch at this time, I could collect myself and finish more expeditiously.

THE COURT: Could we meet again at a quarter of 2. Thank you very much, ladies and gentlemen.

(Luncheon recess)



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AFTERNOON SESSION

1:45 P.M.

(Jury in box)

D A V I D G R E T T O N, resumed.

DIRECT EXAMINATION CONTINUED

BY MR. MALONEY:

MR. MALONEY: Your Honor, may I read from Plaintiff's Exhibit 25 in evidence?

THE COURT: All right.

MR. MALONEY: On the first page, on the plaintiff's direct case Mr. McConnell referred to sales forecast June five weeks of $210,000, and turning over to the second page, the last paragraph, June, Mr. Hewitt states, "This will be a month of consolidation of our previous changes and sales forecasted are 20 per cent higher than May."

Q I show you Plaintiff's Exhibit 25 in evidence, Mr. Gretton, and ask you if you can tell us what May sales were as indicated on Plaintiff's Exhibit 25?

A The gross sales were $132,000.

Q Just the net figure?

A The net figure was $142,000.

MR. MALONEY: And by my calculations a 20 per cent increase over $142,000 would be approximately $170,000,



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so we can stipulate to that.

THE COURT: That is about right.

MR. McCONNELL: That sounds right.

(Defendant's Exhibit BR marked for identification.)

Q Mr. Gretton, I show you a copy of Defendant's Exhibit BR for identification and ask you if you can identify this document.

A This will be exactly the same document as you showed me, Plaintiff's Exhibit 25.

THE COURT: A different month.

THE WITNESS:No, it is the same, June 5, 1970.

MR. MALONEY: I picked the wrong one. This one should be BR.

(Defendant's Exhibit BR again marked for identification.)

Q I show you the new Defendant's Exhibit BR and ask you if you can identify that document.

A Yes, this is the monthly report covering the month of June. It is dated July 6th. It was prepared by Peter Hewitt and a copy had been sent to me.

MR. MALONEY: I offer it in evidence.

MR. McCONNELL: No objection.

THE COURT: It will be received.

(Defendant's Exhibit BR received in evidence.)

Q On Defendant's Exhibit BR what does Mr. Hewitt indicate as the shipments for the month of June?

A The net shipments were $168,000.

Q Which would be approximately the same amount that Mr. Hewitt had forecastbased on the portion of his report for May, Plaintiff's Exhibit 25? Is that correct?

A That would appear to be correct.

Q Can you tell me from looking at that report whether the $168,000 of shipments refers to shipments for four weeks or five weeks for the month of June?

A There is a note on the opening of this report which says the report refers to a five-week period ending July 5th; it will not, therefore, agree with accounts published as at June 30, 1970, a Tuesday.

Q Can you explain to his Honor and the jury what that means?

A Plessey's accounting system had called for a cut-off on the 30th of June by mid-week. This was impractical on a production basis because, of course, we always try to make all our shipments at the end of the week, on a Friday. We had one day for a sort of shipping out, and, therefore, the report covers the period as indicated through to July 3rd, and, therefore, June was a five-week



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month and not a four-week month, so it could have been dictated by Plessey's accounting system.

Q So the $186,000 of shipments was for four or five weeks?

A Five weeks.

Q So the cut-back of shipments we had heard during the trial would be to financial reports? The fifth week would not be included?

A That is correct, yes.

Q Mr. Gretton, I show you a copy of Defendant's Exhibit F in evidence, which has been identified as the ISL 1970 budget. I call your attention to the month of May and I ask you what shipments were projected in the month of May?

A $186,072.

Q What profit did Mr. Hourihan project for the month of May based on shipments of $186,000?

A $16.021 profit.

Q Do yourecall what the profit had been in May?

A No, I don't.

Q Does it refresh your recollection that it was approximately $6 based on the testimony to date?

A I am not sure, but there is a penciled in figure that had been copied on that report that I believe Mr.



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Clarke testified that it was his handwriting that says $6,200 profit.

(Defendant's Exhibits CC and CD marked for identification.)

Q Mr. Gretton, I show you Exhibits CC and CD for identification and I ask you if you can identify those documents.

A CC is my monthly report for the four-week period ending February 28, 1971.

CD is my report for the four-week period ending March 28, 1971.

MR. MALONEY: I offer them in evidence, your Honor.

MR. McCONNELL: May I see them, please?

No objection.

(Defendant's Exhibits CC and CD received in evidence.)

Q Referring to Government's Exhibit CD, Mr. Gretton, the monthly report for the month of March, 1971, that would be the last month of the measuring year? Is that correct?

A Yes.

Q Can you tell from that report what the total amount of orders in arrears were as of March 28, 1971?

A The total released business was $323,372; the unreleased business was $300,485.

Q I believe my question was, can you tell from that report the amount of orders in which we were in arrears as to delivery?

A $8,580.

Q That would indicate that except with respect to that $8,000 we were current in our shipping deliveries of all the released orders up to that point?

A That is correct.

xx (Defendant's Exhibit DZ marked for identification.)

Q Mr. Gretton, I show you Defendant's Exhibit DZ for identification and I ask you if you can identify that document.

A This is a report that I was asked to write in 1971 by I believe Mr. Sinsheimer covering some of the points. It was to be a general report covering some of the things that had happened during the period that I had been in Barbados, July, 1970, to March, 1971, to highlight some of the problems that we found and the difficulties I had encountered during that period.

MR. MALONEY: I offer it in evidence, your Honor.

MR. McCONNELL: I object to this. It was requested by Mr. Sinsheimer after he knew he was going

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to be in litigation. I think it appears from the content that it is self-serving.

MR. MALONEY: That would only go to the weight. Mr. Gretton is under oath. Mr. McConnell can examine him fully as to the accuracy of the statements.

b2

THE COURT: I think Mr. Gretton testified substantially on all these points, and I think I will sustain the objection. We will keep it for identification.

T2

Q Mr. Gretton, with respect to the cable harness business, is testing equipment also required in connection with producing cable harnesses?

A If you are going into cable harness business with all seriousness and hoping to take large volume orders, then, yes, some form of automatic test equipment is desirable.

Q At the time you arrived in Barbados in June, 1970, what kind of test equipment, if any, did ISL have?

A It was non-existent. All we were using was a very simple resistance measuring meter and an inspector at times would check wiring from point A to point B and that was all, but it was all manual.

Q At the time you arrived in Barbados in June, 1970, what was the manufacturing capacity of the plant with respect to cable harness?



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A As I recall, we appeared to be at maximum capacity, which I believe was about $8,000 a month. We had a certain specific amount of trained operators only on the cable harness business and that appeared to be all we were capable of doing.

Q Is that based upon the figures shown on Plaintiff's Exhibit 25, Mr. Hewitt's June 5, 1970, monthly report? I believe you still have a copy in front of you.

A No, I don't.

That is correct, yes, $8,000 a month was being projected then.

MR. MALONEY: Your Honor, may I read a portion of Mr. Kovar's testimony that I would like to ask Mr. Gretton about?

THE COURT: What page?

MR. MALONEY: Page 178. This was on Mr. Kovar's direct testimony.

THE COURT: Do you want to follow this?

MR. MALONEY: "Q What sales were you forecasting for June?

"A $210,000."

At that point your Honor took over the questioning.

"The Court: What was the basis for that?

"The Witness: On the basis of orders in hand,

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delivery requirements and arrearages.

"The Court: Your forecast of June were sales of $210,000, right?

"The Witness: Yes, sir.

"The Court: That is based on --

"The Witness: New sales.

"The Court: What was the figure for new sales?

"The Witness: $210,000."

At that point I indicated to his Honor that I was getting a little confused and his Honor asked an additional question.

"The Court; I am trying to find out, Mr. Kovar, what was the basis of your June forecast of $210,000?

"The Witness; Yes, sir, it was on the basis of the orders that we had in hand and which were in production.

"The Court: How many orders did you have in hand and how many did you have in production, if you remember?

"The Witness: We actually had orders amounting to two million some plus. What we had from those orders were production schedules for completion and for delivery in the month of June."

Then, there was some reference to Plaintiff's Exhibit 25, which I believe contains the $210,000 forecast.



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MR. McCONNELL: Right, which was prepared by your Mr. Hewitt.

Q Mr. Gretton, based upon your examination of the order book and the shop floor program as of June 1, 1970, Defendant's Exhibit CT, what were the total orders outstanding and released which could have been produced and delivered?

A We could never justify more than the 700,000 or seven to eight hundred thousand dollars that was shown on the shop floor program. I think, as I testified earlier, Mr. Lewis, Mr. Parr and Mr. Sweeney all went through the file cabinets in Barbados looking for purchase orders to match against this two million-three million dollar order book that we had been told about.

Q That is the $787,000 figure?

A That we show.

Q In column 5 on CK-1, which we introduced in evidence?

A That is the figure, yes.

I was saying during the whole period they were in Barbados, we were not able to come up with actual purchase orders to support this $2,000,000 order book. When they left Barbados, I carried on looking through the files trying -- I think there was a file, we kept the



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same series number, which is a 14-600 file series number that Mr. Kovar had been using. I kept continually looking into that file to try and come up with purchase orders.

We had the reps go out to customers asking for copies of purchase orders. In the end the total filing cabinet was sent to Boston where again Mr. Parr tried to reconstitute this $2,000,000 order book that we had been hearing about. We were not successful. We never did come up with paper work to support anything more than the figure I came up again this morning.

MR. MALONEY: I have no further questions, your Honor.

CROSS EXAMINATION

BY MR. McCONNELL:

Q Mr. Gretton, did I understand your testimony to be that you were the number 2 man at the Lisbon plant at the time Hewitt was running the Lisbon plant?

A I was, yes, number 2 to Mr. Hewitt.

Q When Mr. Hewitt came to Barbados in March, you became the number 1 man in Lisbon?

A That is correct,yes.

Q Was the Lisbon plant essentially an assembly type operation?

A That is correct, yes.



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Q You would get complete engineering kits from Towcester, is that right?

A We would get an engineering package. We would have to translate it into a production package.

Q That production package would be assembled or fabricated at the Lisbon plant; is that correct?

A That is correct, yes.

Q Was design engineering done at Towcester?

A Design engineering was done at Towcester, yes.

Q Were the materials purchased through Towcester?

A Yes, the materials were purchased through Towcester.

Q I take it there was no marketing function being conducted by Lisbon?

A No, none whatsoever.

Q Was this the same type of operation that you had at Malta?

A Exactly the same type of operation, yes.

Q Lisbon and Malta?

A Lisbon and Malta were exactly the same.

Q When you came to Barbados in June, was the plan to convert the Barbados facility into essentially the same type of assembly operation that you had at Lisbon and Malta?



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A That was the projected plan, yes.

Q As part of that plan you took out the benches that ISL had and put in these individual work stations?

A That is correct.

Q Do you know whether or not these individual desks-- approximately how big were the individual desks, do you recall? I am talking about working area?

b2 A Probably 33 to 36 inches square.

Q Do you know whether those desk tops were large enough to string and check planar arrays?

A Yes, they were.

Q Were you doing any planar array work at the facility?

THE COURT: Tell the jury and me what planar array work is.

MR. McCONNELL: I think Mr. Tucker explained it, but let's have another explanation.

THE COURT: That was a long time ago. The jury and I need it again.

THE WITNESS: A planar array is instead of having the individual planes stacked one on top of another, you come up with an electrical configuration which allows you to lay out on one plane, hence the term planar, the total core and string the core on this one plane whereas



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with this Hewlett Packard stack we had been talking about, the 30 mill one, we ended up, I think it was, with eight boards one on top of each other. When we did that as a planar array, we essentially strung it on one board laid out in one plane.

Q Laid out, what would be the dimensions?

A About 30 to 33 inches.

THE COURT: That would be square?

THE WITNESS: No, it was about 33 inches long and about 7 or 8 inches wide.

Q I believe you testified in answer to one of Mr. Maloney's questions that you had no particular problems with either the Nuclear Chicago or the Nuclear Data accounts, do you recall so testifying?

b3

A That is correct.

Q I show you what is in evidence as Plaintiff's Exhibit 52 and ask you if you can identify that.

A This appears to be a letter from John Grey to myself, dated October 14th.

Q Was John Grey the sales rep who was handling the Nuclear Chicago and Nuclear Data accounts?

A I believe so, yes. Nuclear Chicago I am certain of. Nuclear Data I am not too sure of.

Q Would you read the first paragraph of that letter.



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A "As you are aware, Nuclear Chicago placed an order for one piece of a 30 mill open frame (PC construction) version of a 16K x 12 stack. Nuclear Chicago will assemble the diode boards and connectors themselves. Dataram was successful in getting a onepiece prototype on this programas well. Delivery will be a most critical consideration. Bob Young needs delivery of this prototype by the week of November 16th. A nice order in 30 mill is at stake. If we not meet the delivery, time will cause them to go to Dataram for the first time. I'd sure like to prevent this if at all possible."

Q Do you recall you failed to meet the delivery schedule and, in fact, this customer went to Dataram as a second source?

A I believe that is correct, yes.

Q I show you what is in evidence as Plaintiff's Exhibit 63 and ask if you can identify that.

A This is a copy of a telex to me, dated the 14th of January, 1971.

Q The 14th of January, 1971?

A Yes.

Q It is in evidence, would you read it, please. It is very difficult reading, I know.

A "Dave: This confirms Telecon" -- I am not

sure what the words are after that -- "Frank called from his road trip" -- I can't read, somebody has penciled in -- "minutes after our recent telex to you. We are in serious critical danger of losing Nuclear Data, Nuclear Chicago and Hewlett Packard accounts. Customer reports and comments" -- I am assuming the next word is -- "during his trip seriously unfavorable. Frank wants complete rundown of all three accounts. Reasons for failure to meet delivery schedule. In short, the complete status on each account up to date. Disaster is striking."

THE COURT: What was the date of that?

THE WITNESS: The date is the 14th of January, 1971.

Disaster didn't strike; we held the orders.

Q I believe you testified that you requested shipment of two Mark VI testers to Barbados?

A That is correct.

Q Some time in August of 1970?

A Yes, that is correct.

Q Do you recall when the first of those arrived?

A The first one arrived in November from England. It was via England from Lisbon.

Q It arrived at the very tag end of November, isn't that right?



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A Yes, I believe so.

Q You actually didn't get it on line until some time in December?

A It would take approximately a week to get it on line, yes.

Q That was a used Mark VI tester?

A That was a used Mark VI tester.

Q That didn't cost 24,000, did it?

A I believe it did.

Q Didn't you have an invoice at 10,000 for that?

A I believe I did, but I am not sure. I don't have the records on this. I believe it was charged at 10,000.

Q When did you get the second Mark VI tester?

A I believe that came during either December or January; December, 1970, or January, 1971.

Q Are you sure of that?

A I am not too sure, no. I think I said in one of my reports exactly when it did arrive.

Q When you came on board in June, didn't Hewitt and Boyce and Keppel advise you at that time that this test equipment was going to be needed?

A I don't think Hewitt did. You have got to remember, I think, that Peter Hewitt was a production



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control-materials man. He was not an electronic engineer. He was relying on information that had been given to him by the people working for him, the electronic engineers.

Q He was also -- excuse me.

A They had just taken delivery. That has been refreshed, as far as I am concerned, by this Plaintiff's Exhibit 25 where I noticed it says: "Testers. Two more machines arrived from Towcester in the first week of June. Production testing of Hewlett Packard stacks were started. This considerably relieves the existing CTC testing load."

Q Testing was under Mr. Hewitt, wasn't it, at the time he was at Barbados?

A I believe, yes, the people running the test section were reporting to Mr. Hewitt.

Q Did either Keppel or Boyce tell you back in June that you were going to need this additional test equipment come the fall?

A No.

Q Nobody told you that?

A Nobody told me at all. This is something I had to find out for myself when I started getting involved in the test equipment. This is when I found out that we then had to enable us to meet the Magnavox project deadlines had to start modifying the CTC tester and the



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modifications I was told would take three weeks.

Q Do you know why it took so long for this used Mark VI tester to get to Barbados?

A Yes, I do. Lisbon was very heavily booked. The test section over there was a very large test section and we were always short of test equipment. We were running three shifts in Lisbon something like six days a week and the only way we could get a new tester from Lisbon was to wait until their load was relieved.

Q I thought Lisbon had excess capacity and that was the reason that the Hewlett Packard work was farmed out back in the spring of 1970 to the Lisbon shop.

A Yes, I believe in spring 1970 Lisbon had excess capacity. In the meantime we had taken a rather large order for Univac. We had also increased, I believe it was, for the English company International Computers Ltd. and developed further new products in that time.

Q Going to that subject, the units thatwere farmed out to Lisbon and your testimony that you were billed at Lisbon's times rather than Barbados times and you asked for an adjustment, is that a fair summary of your testimony?

A Yes, it is.

Q You asked for an adjustment using Barbados times rather than Lisbon's, is that right?



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A That is correct, yes.

Q I believe you said that the Lisbon times were approximately twice those of Barbados?

A That is correct.

Q I show you Plaintiff's Exhibit 54, which is in evidence, and which is your letter to Mr. Clarke, under date of December 16, 1970, and ask if that refreshes your recollection that the Barbados times were approximately one-third of those in Lisbon?

A Yes, one-third is the true figure.

THE COURT: Again, so that the jury and I understand that, when you say it is one-third of Lisbon, does that mean Barbados could do a particular job in one-third the time that Lisbon would take to do it?

THE WITNESS: This particular job, yes.

THE COURT: Which particular job?

THE WITNESS: This was the Hewlett Packard planes. Lisbon had no experience in strining this type of unit. It was a double sided type of unit and the jigs we had in Lisbon were inferior to the ones that were in use in Barbados.

Also, included in these times are the times for actually setting the cores on tape. Again in Europe--and Plessey were sort of the world leaders in Europe --



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we were a little behind the times as far as core setting techniques and most of this time was set up in setting the core, the time in Lisbon was taken up in setting the core on the tape, transferring it to the board.

In Barbados we had a much better system for doing this and it was much faster. It was something like four times faster in Barbados to load the cores for this Hewlett Packard job.

Q Let's go to the Magnavox order. I believe you testified that the test jig for this stack was being fabricated or made up by Towcester, is that right?

A That is correct.

Q Do you know when they started doing that in time?

A I am not sure of the exact dates. I believe it was April; May-April.

Q When did that test jig arrive?

A I believe it arrived in August, 1970.

Q It was defective, is that right?

A It didn't mate with the plane that we wanted it to, no.

Q So, you had to go outside to another test jig company to have another test jig made, is that right?

A That is correct. Yes, I took one look at it



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and decided that we would buy from this American company, Winters Engineering.

Q That set back your Magnavox program, is that right?

A That set back the testing of planes for six weeks.

Q When you arrived in Barbados, there was a schedule for this whole Magnavox program, wasn't there?

A I believe a diagram had been drawn up, yes.

Q Is that called a critical path analysis?

A Yes, it is. It wasn't a true critical path analysis drawing.

Q I am sorry?

A It wasn't a true critical path analysis drawing.

Q What did it show, whether it was a true one or not?

A I believe it showed that the anticipated completion date of a prototype would have been October, 1970.

Q Other than that, what type of information would have been on this schedule?

A It would start out with the various operations that could be carried out in parallel like the component parts, it would show estimated time to build the stacks, estimated time or anticipated time to test, anticipated

time to put together, carry out all the various environmental and humidity checks and culminating in the final date when you would expect to have one unit ready for qualification tests.

Q Mr. Keppel was heading up the Barbados team in charge of this project, is that right?

A That is correct.

Q When was he asked to move to Boston?

A I think he was first asked around July to my knowledge.

Q When did he go up to Boston?

A He went up the end of July, beginning of August. He went to the United States. I am not sure that he specifically went to Boston.

Q Shortly thereafter he quit, is that right?

A The end of August, beginning of September, yes.

Q Didn't Parr tell you the reason that Keppel quit was that he would not agree to take a cut in pay, in salary?

A Parr didn't tell me he was asked to take a cut in pay. Mr. Parr indicated to me that Keppel was asked to transfer at exactly the same salary.

Q At the same pay,but now he was subject to U.S. income taxes, is that right?

A Yes, that is correct.

THE COURT: Don't ask this gentleman about that. He has made the point that he became subject to income taxes.

Were there any income taxes in Barbados?

THE WITNESS: Yes, very steep income taxes.

THE COURT: He wouldn't have to pay those any more?

THE WITNESS: No.

THE COURT: All right.

Q Keppel was your chief engineer, right?

A Yes.

Q He went to Boston and he quit. Who came up to Boston to replace Keppel?

A I didn't say he went to Boston and quit. I said he came to the United States. I am not sure he ever came to Boston.

Q All right.

A I wouldn't like to be on record as saying that.

Q Okay.

A Who took over?

Q Who took over for Keppel?

A Mr. Boyce.

Q Mr. Boyce was your head man in charge of quality



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control at Barbados, is that right?

A That is correct.

Q He was also an engineering man?

A He was a design engineer, yes.

T3

Q I believe you testified that you put in effect this quality control force?

A Yes.

Q Some time in August or September, I forget which, but when you came to Barbados in June was there quality control?

A There was a department called quality control.

Q Were there some people in there?

A There were some people in the department.

Q Heading up to Boyce?

A Yes.

Q How many people were there?

A About 13, I believe, but they were not effective as a quality control department. They were not policing the production floor effectively at all.

Q Now, after Boyce went to Boston who did you have left at Barbados that was a core memory engineer?

A Don Ballantyne.

Q Besides Ballantyne?

A Myself.

Q Anyone else?

A No, not on the electrical side.

Q When did Boyce to to Boston again?

A As I recall, October.



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Q Well, after Keppel quit and Boyce went to Boston, who was working on the Magnavox project?

A Boyce in Boston. What we found out about the Magnavox project, it was not so much an electrical problem any more, but a mechanical problem, how we were going to fit this thing together, how once we got it together we are going to take it apart if we had problems with it.

So around August, '70, Mr. Kavolious had been hired in Boston, together with quite a few design development people to support Boston and Barbados, and it was our thought we would not need design engineers, it would be a waste of time, because the Barbados function, all we would be developing would be test specifications and insuring that the product that was being made was being tested to the electric specifications stipulated by our Boston facility and our design engineers.

Q Well, I thought that Mr. Kavolious was not assigned to the Magnavox project until some time late in November?

A Assigned permanently with no other responsibilities in November, but he was looking at that project throughout from August onwards.

Q Where was he looking at it? Up in Boston?

A In Boston, yes.



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Q I thought that the project was still down in Barbados?

A Drawings for the project were still in Barbados and we were still in the planning stage, we had not got to the stack stage; I think I have already testify, or I believe it is in some of the reports, Kavolious came down, picked up the drawing package, took that back to Boston and was examining this sort of concept of how we were going to build this thing from Boston; we also sent Phil Wood up to Boston and Phil Wood had been a sort of mechanical design engineer assigned to Mr. Keppel, and he was advising on this project, too.

Q I thought you --

THE COURT: You have said that four times. It is not what you think. Put your questions in another way, not on the basis of what you think. You have done that four times. That is not important.

Q Were the expenses of the Boston facility included in your price build-up?

A I am not too sure on that point at this stage. If you have a price build-up I would have a look at it. Maybe I can ascertain that. All I was concerned with when I was doing a price build-up is advising no material costs, no time for stringing, no Barbados overhead.



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Q Was there any requirement to your knowledge that the sales representatives collect the accounts payable in order to be entitled to their commissions?

A I believe that was suggested in December when we were getting rather very desperate for cash, yes.

THE COURT: Do you remember who suggested that?

THE WITNESS: No, I dont, your Honor, not really. I believe Mr. Clarke had been down in Barbados in November, December. I believe Mr. Parr had, too. And I think it was a sort of general discussion as to what our cash situation was, what could we do to rectify the situation, and I think in the general conversation it came out we are going to have to ask the reps to become debt collectors.

THE COURT: You never saw their contracts, though, did you?

THE WITNESS: Not until after. I think I looked at them in May, 1971.

Q This was a question of saying to the reps, "Boys, we have not got any cash and we would like to pay you your commissions, but we have not got any cash, and if you get your customers to pay, we will have something to pay you with"?

A I think we sort of went to them with the fact that, look. John Allsop, who was the comptroller, was

spending time trying to reconcile these accounts. And we said, "You are telling us from your records that so much is being shipped, that there are so many debit returns, credit returns; the customers are telling us another thing; our own records don't match with either of you. Please, can we all get together and try to sort it out, and until we sort it out we don 't have the cash to pay."

But under the contract --

THE COURT: He hadn't seen the contract.

MR. McCONNELL: He said he saw it in May.

THE WITNESS: I saw it in May, 1971.

THE COURT: Well, he is not a lawyer, either.

Q When you established the facility in Boston would you tell us what functions were there?

A Design engineering with its associated drafting department, an estimator, so that we could do price build-ups direct from Boston, manufacturing, engineering, a test and test repair facility was set up. I think they had possibly six women who could string and core, and repair core; I think it was envisaged we put a prototype section in as well.

Q Were the marketing functions being budgeted out of there, too?

A Yes.



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Q And purchasing?

A Yes.

Q Purchasing had come down from Farmingdale?

A Purchasing had gone up from Farmingdale.

THE COURT: We say down east around here, so maybe it is down.

THE WITNESS: We established this direct contact of marketing in Boston because the problem was that we had customers ringing people in Barbados; they telephoned Keppel there, directly, they telephoned Boyce, they telephoned George White asking for delivery schedules. They probably get some sort of schedule which, of course, was not an authorized delivery schedule.

So I wanted and insisted that we cut off all customer contact between the customer and Barbados directly, other than quality control. The only people I wanted to talk to each other was the quality control of the customer and the quality control in Barbados.

Q I show you your report for December, which is in evidence as Plaintiff's Exhibit 38, and direct your attention to page 2 thereof and that part of the report which reads, "Mr. Kavolious carried out a full investigation into the Magnavox project and it was decided to transfer this project to Boston. We had been experiencing con-



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siderable manufacturing and basic design problems with this stack; therefore, it was felt that the only chance we had of completing the units was to effect a complete transfer of the project to Boston, where the engineering department would be able to monitor the progress one hundred per cent."

Now, the date of that report is December 23?

A That is correct.

Q Does that refresh your recollection that the Magnavox project was not transferred to Boston until either the end of December or early January?

A It was not transferred in its entirety until that date, no.

Q And the CTC stack tester that you were going to use on the Magnavox project was not transferred to Boston until January?

A That is correct. That was transferred as soon as we had our Mark VI stack tester up and running.

Q Well, after you established the facility at Boston did you experience communication problems, that is, getting engineering feed back from Boston and just a general breakdown in communications between the two facilities?

A We had problems, yes, there is no denying it, as every offshore facility, I believe, has problems.



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Q Do you know John Norstedt?

A No, I have never met the man before. I only heard of him by talking to people like Peter Hewitt.

Q I show you what is identified as Plaintiff's Exhibit 57 and ask you if you can identify that?

A Yes, I can.

Q What is that?

A I am rather surprised to find this in the files, actually. This is a letter that I wrote to Frank Parr on the 19th of February, 1971, but I never sent it unfortunately, and as I put on the top, didn't even have time to discuss it with him in February.

MR. McCONNELL: I offer it in evidence, your Honor.

MR. MALONEY: I object.

MR. McCONNELL: This refers to all theproblems he was having with the Boston facility.

THE COURT: You say this letter was never sent?

THE WITNESS: Never sent and never discussed, unfortunately. It was something that was in my private file in my desk in Barbados and it was brought up here.

THE COURT: I have trouble reading it.

THE WITNESS: It has been typed, actually, when I first saw it, I think, in June of '73, and Mr. Maloney,



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I believe, had his secretary attempt to type it up from my writing.

MR. MALONEY: I will make a bargain. If we can put in Mr. Gretton's end of the year report, put them both in, and have the jury evaluate one against the other.

THE COURT: I know you would be delighted to have that done. I won't receive this, but you can use it for further questions. We will take a five-minute recess. You can read it and ask any questions you want.

(Recess.)

MR. MALONEY: Mr. Gretton referred to a typewritten copy. I have a typewritten copy of the letter. I have not had an opportunity to have it proof-read, but I think it would be more convenient for Mr. McConnell and yourself to follow it, and subject to your Honor's comparing the typewritten copy with the handwritten one.

BY MR. McCONNELL:

Q Referring to Plaintiff's Exhibit 57, which is the telegram or Twix dated February 19, 1971, that you received from Mr. Parr --

A I am just not sure at this stage. I don't know exactly whether the Telex said anything.

Q You state, "Mike Boyce has been in Boston since October, and to date the only written information we



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have ever received from him was his trip report, and that told us nothing except we had vague problems on HP 20 mil --

MR. MALONEY: I object to reading. The letter is not in evidence.

THE COURT: That is not what I wanted to do, Mr. McConnell. You can ask him what he had heard from Boyce. You can ask him that. But don't just read this. This is not in evidence. And I have indicated you can have this letter from which you could ask questions about these various things, not what he said in the letter.

Q What written information had you received from Boyce since he went to Boston in October?

A It would appear from this letter that the only thing I had received was a report indicating that we had vague problems on the HP 20 mil. I think this letter goes to show one of the reasons why I had agreed to let Mike Boyce go to Boston as an engineer. He had been in charge of QC in Barbados.

THE COURT: What does that mean?

THE WITNESS: Quality Control Department. And he wasn't happy in that position, and I certainly wasn't happy having him in that position.

If you are going to be on the quality control side, you have to be a very big communicator to be able to



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pay attention to detail, and Mike Boyce was not that sort of person. He was and still an excellent design engineer, but he was not a good communicator and we had problems with Boyce because of this.

THE COURT: The point that you are making is that Boyce went to Boston in October and come February you hadn't heard much from Boyce? There had been a lack of communication between Barbados and Boyce?

THE WITNESS: Between Boyce and myself.

Q Did this create a problem insofar as finding out just what the problem was on returns?

A This was one of the problems, yes. We relied on feed-back from the field, either the reps, we relied on feed-back from Boston. If a return came into Boston, if they looked at it, we wanted to know exactly what was wrong with it, what the serial number was so that we could take steps precisely to the problem on our production floor.

Q You were not getting that kind of feed-back from Boston?

A No, I was not getting it from Mike Boyce; I was getting that type of information from Sam Arnow and Eric Ormandy. Mr. Eric Ormandy was, in fact, the quality control man in Boston. He had been hired in November.



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Q Now, what is core data?

A In the context of this letter?

THE COURT: Not the letter. Tell him what core data is.

THE WITNESS: Can you amplify what you mean?

Q Well, what are core specifications?

A Yes, these are the specifications issued by the manufacturers of a particular core that enable you to sort of decide whether core A or core B or core C should be included in your design. It gives the basic output of the core if that core is fed with basic input pulses.

Q Was this core data up in Boston?

A No, it was not. The core date book mysteriously disappeared when Mr. Keppel left. When we contacted him he said he had taken it because it was his, not ISL's property.

Q Were you suffering in Barbados because of this lack of core data information or specifications?

A We suffered in 1971 because we had a new project that required a core that we didn't have a data sheet for in Barbados. That is the only incident I can recall where lack of the core data sheets caused us delay.

Q I believe you testified that you found no production cost control at the Barbados facility?



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A That is correct.

Q I show you what has been marked for identification as Plaintiff's Exhibit 116 and ask you if you ever saw that before?

A I have no recollection of ever seeing this.

THE COURT: You never saw that before?

THE WITNESS: No, not that I can recall.

MR. McCONNELL: That is all.

THE COURT: Any other questions?

MR. MALONEY: Yes.



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REDIRECT EXAMINATION

BY MR. MALONEY:

Q Mr. Gretton, Mr. McConnell showed you Plaintiff's Exhibit 52 in evidence, the letter from Mr. Grey to yourself concerning Nuclear Chicago. I believe you indicated that we did fail to deliver the particular stack referred to in this letter on time and as a result Nuclear Chicago took on Datarama as a second source.

Now, do you recall when that occurred?

A Not exactly. Could I have a look at the letter, please?

From reading this letter I seem to recall that we had to deliver this particular stack in either November or December of 1970.

Q Do you recall whether that is the same incident to which Mr. Tucker testified on his direct examination?

A Not exactly, no.

Q You have no recollection?

A No.

Q Let me show you Defendant's Exhibit CU for identification, which is Mr. Tucker's weekly reports and some of your letter responses.

Referring to his weekly report for January 23, 1971, it indicates orders received Nuclear Chicago, and



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then it sets forth three orders from Nuclear Chicago, anddown under Activities, next to Mr. Grey, the rep for Nuclear Chicago, Mr. Tucker stated, "Above orders taken at premium prices as NC insisted on second source; Datarama got 15 units. If we had gotten prototype in by 11-15 and not had serious delivery and quality problems in production, we would be sole source."

I ask you if that refreshes your recollection that the --

THE COURT: First,does that refresh your recollection?

A It does, yes. This is one of the three or four purchase orders that appears to have been let. It is the 16K x 12 which I think was the bottom purchase order, listed on the top of that report.

Q Does that also refresh your recollection that the order to which Mr. Grey is referring is the same order as to which Mr. Tucker testified?

A It does, yes.

Q What would be the total value of the order that we lost to Datarama?

A I don't think it is clear.

Q It says Datarama got 15 units, and by identifying the particular unit involved could you calculate the cash



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value?

A You would have to take the average. I assume if they got 15 units of this particular 16K x 12, then it would be 15 times $1,850 would be the maximum they could get, if you assume they got 15 of those units. It is not clear from this whether 15 were released and they were made up of various quantities of the 4K x 12, the AK x 16 and the 16K x 12, or if it was 15 of the 16K x 12.

So I would assume the maximum it could be would be 15 times $1,850.

Q Now, with respect to the three purchase orders received from Nuclear Chicago in the week ended January 23, 1971, I notice that Mr. Tucker has indicated delivery schedules for the first two orders, but not the third order to which you referred.

Do you have any recollection of what the delivery schedule was for the Nuclear Chicago purchase order 112927 relating to the 16K x 12?

A I have no recollection at all of that.

MR. MALONEY: Your Honor, with respect to this issue of how much ISL was charged for the planes, I believe some time last week we gave your Honor and Mr. McConnell copies of some correspondence and we don't have our copies here.



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THE COURT: Are these them?

MR. MALONEY: These are them, sir. I would like to mark these for identification.

xx (Defendant's Exhibits EA and EB marked for identification.)

Q Mr. Gretton, I show you Defendant's Exhibits EA and EB for identification and I ask you if you can identify those documents?

A Yes. Document EA is a letter that I wrote to you on June 27, 1973. The subject was the Hewlett-Packard memory planes that had been manufactured for ISL in Lisbon.

And document EB is a letter that I wrote to you on June 29 on the same subject.

Q Do you have a recollection of what the total amount in dispute was concerning the amount by which Lisbon had over-billed ISL?

THE COURT: Does that refresh your recollection?

THE WITNESS: It refreshes my memory, yes. It would appear that Barbados had been over-billed by approximately $3000.

Q Do you have any recollection of whether or not that was the total amount that ISL had been ever over-billed with respect to those planes?



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A Yes, sir.

Q Do you have any recollection of whether this matter came to your attention during the measuring year?

A Yes, it did.

Q What did you do when the matter came to your attention?

A I wrote to Mr. Don Clarke and to Peter Hewitt, who had gone back to Lisbon and was now head of the Lisbon facility, saying I disagreed with the charges as they were being made, and it would appear that Mr. Lewis, who was in Towcester, also seemed tohave got in on the act, so to speak, and he instructed Lisbon that the Barbados times were to be the only times used for this project, and we were charged on the basis of Barbados time standards.

Q Do you recall whether or not that matter was straightened out before the end of the measuring year?

A I believe it was, yes.

Q Could you explain to his Honor and the jury what standard times are, Mr. Gretton?

A They had different meanings in different parts of the world. Standard times, as far as we were concerned in Barbados, was the estimated time it would take to complete a particular or unique operation assuming everything was perfect, so that you would build up standard time for a



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girl stringing a unit, assuming that it required to reach over and pick up wire, wire would be wire, assuming everything was perfect. There was no time study as such on these. It had been based on studies done over the years and put into a booklet, these times.

It was estimated how long it would take if I sat at this stack to reach forward and pick up a pair of tweezers. Then you estimated how many times you had to do that in stringing an operation, how many times you had to pass the wire through a group of cores; it was tabulated on a form, and you came up with a standard time.

Allowances were then made for the operator's efficiency due to going to the bathroom, lack of attention, also, a sluggish start first thing in the morning, building up to a particular efficiency, dropping off just before a break, building up after a break, dropping off after lunch break, building up during the afternoon, and then dropping off just before people go home. All this was taken into account.

THE COURT: How about difference in eyesight?

THE WITNESS: No, it was assumed you had a perfect operator.

Q The standard times assumed a perfect operator?

A Standard times assumed perfect conditions.



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Q Does the term labor efficiency have some relationship to standard times?

A No. In Barbados it was assumed sort of a hundred per cent efficiency.

Q What did you find the efficiency to be actually when compared?

A As against the standards? About 20 to 30 per cent. The standards in Barbados, we would have been very happy if we achieved 80 to 90 per cent of the standard. That is what we would have considered good. Andwe could have related that back to what we were used to in the labor facility, because there we actually took a stopwatch and timed a group of girls during the same operation. You then rate the girls: are they operating efficiently? Are they sluggish? And then you come up with a clocked standard time, and that standard time, of course, if this is put in, you would expect to be able to beat that particular standard time.

Q What effect with the volume of production have on the relationship between efficiency as a percentage of the standard time, the model?

A It is generally recognized the higher the volume the higher the efficiency.

Q So that if you don't have enough work available to keep all of the people working full-time, what effect



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would that have on their ability to meet the standard times in producing a particular product?

A It will decrease the efficiency; it will also decrease the efficiency if you have to change them from job A to job B during the day or during the week, because they are on a learning curve all the time, and they have to learn each time they pick up a new job and get in motion for that job.

Q I believe Mr. McConnell asked you whether or not the standard times in Barbados were only one-third of the standard times in Lisbon with respect to the stringing of the Hewlett-Packard planes. Was there some relationship between the efficiencies in Barbados and those in Lisbon?

A It is rather complicated. The efficiency in Barbados against the standard times was very low. The efficiency in Lisbon against the Lisbon standard times was high.

THE COURT: And the Lisbon standard times were twice the Barbados times?

THE WITNESS: Three times, but the girls were achieving that. In Barbados although we were saying something like 10 hours, it could quite likely take 30 hours to do that job correctly, because the standards are based on the fact that the job is not complete until it is proven



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that you have done the job correctly, so that you can do the job, send it for inspection. If it is inspected and found to be incorrect, then it has to come back and be repaired, and that time counts against the girl.



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THE COURT: Ladies and gentlemen, would you like to string cores down in Barbados?

JUROR NO. 4: Not at all. A direct question and a direct answer.

THE COURT: That is right.

THE WITNESS: I don't think I have ever seen anywhere in the world any male stringing core. Everything is done by women.

THE COURT: With the women's lib movement, maybe we had better get going.

JUROR NO. 1: What is the average temperature down in Barbados?

THE WITNESS: It never gets below 75 and the humidity is always, again, never below 75 per cent humidity I think would be a fair statement going up to 90 per cent humidity. That is why the factory, of course, had to be air conditioned because the high humidity would have a detrimental effect on the planes, particularly in the test area.

JUROR NO. 1: Thank you.

THE WITNESS: It was nice to work in the factory. I could never understand why my wife was always ragging me when I came home because she had been without air conditioning and driving the children back and forth to



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school.

JUROR NO. 1: You should have given her a job.

Q With respect to the Magnavox project, was the six-week delay because thedefective test jig produced at Towcester the sole cause of your being unable to build a prototype by October 19th?

A It was definitely not the sole cause. It just contributed towards it, that's all. It was a series of calamities with that particular unit.

Q Did you and the people working under your supervision and the people in Boston continue to use your best efforts to build that prototype as soon as possible?

A Yes.

Q Prior to the time that Mr. Kavolious was assigned to the project full time, had anyone to your knowledge been assigned to that project full time before?

A No, not full time.

Q I may have asked you this before: who were the engineers working on it, Keppel, Boyce and Ballantyne?

A Keppel was the engineer coordinating the project. Mike Boyce was responsible for quality control documentation. Don Ballantyne was test documentation and Bill Wood was a mechanical design engineer assigned to the project.

Q Do you recall whether or not there were any



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disagreements between Keppel and Boyce as to how much time it would take to build a prototype that would qualify?

A Yes, I believe there was. Keppel seemed to think we could build it. Boyce and Ballantyne were not too sure and we had at the various meetings that we held on the subject, there was always controversy as to how the project was going.

Q Who took Mr. Boyce's place as head of the quality control department after he left?

A I did. I had done quality control in Lisbon as part of my duties as technical manager. I had been responsible for the total quality of the IBM project that we had in Lisbon where we were delivering something like 4,500 of these memory stacks in one week and so I assumed direct responsibility for the quality of the product in Barbados.

Q I believe you testified that there was a problem with respect to customers attempting to contact various people in the plant directly concerning delivery schedules and that you directed that that no longer be done. What was the procedure which you established with respect to inquiries from customers concerning delivery schedules?

A They had to go through the one source, that one

source being the Boston office. Boston would then contact Barbados by either telex or phone. If they phoned, they would phone me. If they telexed, I still saw all the telexes and we would make sure we had one answer going back because, as I think I stated, just about everybody was giving customers delivery dates and it was just causing confusion and problems.

Q In talking about quality control feedback, I believe you testified that the feedback would come either from the reps or from the engineers in the Boston facility. Do you know whether the reps were maintaining contact with the customers to learn of the quality problems which they were experiencing?

A Yes, they were, but they tended to be very vague and this was one of my criticisms. It was no use of somebody getting ahold of me and say, I had a quality problem with the Mohawk stack because I just didn't know where to look. I needed to know what the serial number was and what the specific problem was. I needed to know the serial number because I could then go back to our records and say, okay, this unit was produced during a particular time span and we could check if anything had changed with our testers or with our procedures during that time span that might have contributed to the particular problem.



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We had not been getting that sort of feedback from the reps. They had always been "the unit failed," but never any specific information as to what the exact failure was.

Q Did you understand it to be one of the responsibilities of the reps to keep in touch with the customers to obtain such information?

A Yes, that was a primary responsibility of a rep.

MR. MALONEY: I have nothing else, your Honor.

THE COURT: All right.

RECROSS EXAMINATION

BY MR. McCONNELL:

Q Mr. Gretton, weren't the clock times for Barbados the actual times less than those for Lisbon?

A I don't understand the question, I'm sorry?

THE COURT: I suppose what you mean -- what do you mean by the clock time? The time of an operator to do a particular job?

Q I believe the testimony was that standard times represented estimated times for the particular work, is that correct?

A That is correct, yes, in Barbados.

THE COURT: Were there any what he calls clock



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times, did anybody clock an employee in Lisbon and an employee in Barbados and compare them?

THE WITNESS: On particular units, yes.

Q Weren't the clocked or actual times for Barbados less than those for Lisbon?

A On the one unit that they were able to compare and that was the Hewlett Packard plane that was being strung in Lisbon and was being strung in Barbados. As I testified, in Lisbon, they had never strung that type of unit before. The jig and fixturing for that type of unit was not as efficient as the jigs and fixtures that we were using in Barbados.

Q In your letter were you asked that the price be adjusted on the work that was done by Lisbon, the Hewlett Packard stacks --

A Yes.

Q -- Plaintiff's Exhibit 54, you state, do you not:

"The times in Barbados have been verified and proven correct by Mr. Cuthbertson during the recent visit and this visit report comments on the slack standards operating in Lisbon".

A That is correct, yes. The standard times had been verified by Mr. Cuthbertson when he came to Barbados.

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Q I show you what has been identified or what is marked as Plaintiff's Exhibit 117 and ask if you can identify that document.

A I have seen this document before, I seem to recall. I am not sure who prepared it.

Q What is that?

A It would appear to be a Vari-Systems 2175, standard versus actual times, Barbados and Lisbon.

Q Doesn't that show --

MR. MALONEY: Your Honor, I would like to see the document before we have any further questioning on it.

THE COURT: All right.

(Pause.)

A Vari-Systems was never strung in Lisbon during the measuring year. That document must have been produced late 1971, early 1972.

Q Doesn't that show the actual times for this Vary-Systems for Lisbon as higher than those for Barbados and I direct your attention --

A No, not entirely.

Q -- to the summary at the bottom?

A In certain instances, core loading is the I have been talking about all along. In Barbados it took 40 hours. In Lisbon it took 120. That is because the technique



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was totally different.

If you string the X and Y wires, in Barbados it was 851, in Lisbon it was 750.

If you are soldering, which was another technique which was more advanced in Barbados than in Lisbon, 92 hours against 540.

In 1972 I went to Lisbon with Mr. George White and we had by that time bought videotape equipment and we went across to Lisbon to show the Lisbon people exactly how we soldered and what the technique was because this was one of the techniques, soldering, where the American manufacturing engineering was far -- without reservation -- far superior to the European.

Stringing times, the actual stringint times, in fact, in one instance Barbados is higher. In the other it is lower.

MR. MALONEY: Excuse me, your Honor. I would be glad to stipulate to subtract the $9,000 from the measuring loss, but I don't understand the relevance of this other than the stringing of these few Hewlett Packard planes.

THE COURT: I know, but you raised it on direct examination so he brings this on recross. All it means to me is that on this core stringing Barbados did that more efficiently than Lisbon and some of these other things



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Lisbon did it more efficiently than Barbados.

Is that right?

THE WITNESS: Yes, there was a difference of technique.

Q What are the total for all jobs for Lisbon and Barbados?

THE COURT: I don't think we need all the totals. Let's just leave it at that. I think you have exhausted the subject.

MR. McCONNELL: All right.

Q Actually, the amount of the adjustment was 6,000, not 3,000, isn't that right?

A Let me read the letter again. A credit of 6,000, yes.

Q That was on the basis of Barbados times, standard times, but Lisbon pay scales, right?

A It was based on the intercompany transfer price that had been agreed at that time for any labor that was done so that if we had done labor for Lisbon, we would have charged 1.223 hours. It was agreed, as far as I can recall, it was an agreed transfer price between the two facilities or between all the facilities.

Q Do you recall what the price was per hour?

A No.



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MR. MALONEY: Your Honor, I will again stipulate--

THE COURT: I think we have really exhausted it.

MR. McCONNELL: That is all.

THE COURT: All right, any other questions?

MR. MALONEY: No, sir.

THE COURT: All right. You are excused, Mr. Gretton.

(Witness excused.)

MR. MALONEY: Your Honor, may we approach the bench for a moment?

THE COURT: Sure.

(Conference at the bench not recorded.)

THE COURT: Ladies and gentlemen, on account of witness problems, I am going to let you off a little early today. Perhaps in this weather that is a good thing. You may have to do some waiting on the way home so we are going to adjourn now and we will meet again tomorrow at 10 o'clock and I hope you have a nice evening.

(Adjourned to March 22, 1974, at 10 A.M.)

SCIENTIFIC HOLDING COMPANY, LTD.
v.
PLESSEY INCORPORATED

March 25, 1974,
10:30 A.M.

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THE COURT: I owe you, as well as counsel, an apology for not showing up Friday. I got one of those bugs that is wandering around. I am glad to say I am going to live. But I'm awful sorry. I hope none of you were inconvenienced because of that.

You may proceed, Mr. Maloney.

MR. MALONEY: The defense calls Mr. Donald Ballantyne.

A N D R E W D. B A L L A N T Y N E, called as a witness, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. MALONEY:

Q Mr. Ballantyne, will you state your full name and address for the record?

A My name is Andrew Ballantyne; my address is 1954 New Jersey Coast, Costa Mesa, California.

Q Will youtell us your educational background?

A I am a qualified electrical engineer. I have a degree in electrical engineering from the University of



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Glasgow and some post-graduate work in semiconductor technology and circuit analysis.

THE COURT: You sound like a Scot.

THE WITNESS: I am, indeed.

Q Will you tell us what your work experience has been, Mr. Ballantyne?

A I graduated in 1965 and joined Standard Telephone and Cables, working in electrical circuitry and amplifiers and telephone equipment and some digital circuitry in connection with telephone equipment. I left them in late '67, I suppose, and joined a consulting engineering group in New Castle, in England, working on communication, control, control systems mainly for the power inudstry. I then left in the end of '68 and joined International Scientific as a development engineer working for the then vice president, Paul Christensen. Then as things progressed I became test engineer and manager and applications engineer, working on the design and development of stacks, as well as the technical problems involved in testing them and getting them through the test.

THE COURT: Where did you work for ISL?

THE WITNESS: In Barbados, West Indies.

Q Did you remain with ISL after Plessey assumed management and control?



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A Yes, I was with International Scientific Limited in 1970 when Plessey took over and became International Scientific (1970)Limited. I stayed with the company through that year, and in April, '71, when it moved from the Maynard plant out to California I moved with them, and I was transferred permanently to the United States in, oh, May or June of 1970, and I was with the company until July of last year when I left and joined my present employment.

Q How are you presently employed?

A I work for Electronic Memories and Magnetics, which is again a core memory house and memory stack house. It is located in Los Angeles, and I am with the military magnetics group there. I make military stacks mainly for space guidance and applications like that.

Q During the measuring year did there come a time when the production layout was changed at the plant in Barbados?

A Yes. That would be towards the end of 1970.

Q Did you participate in any way in making those changes?

A Yes, I did. We set up the operation down there. There were so few electrical engineers at all, just about Mr. Gretton and myself. We tossed a coin, and I lost, and I ended up in charge of practically everything electrical.



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The layout involved quite a change in the plant, a 115 volt distribution, in the main primary working current distribution. We planned the whole thing, and we were going to change the loads in the factory area.

So George White and I went through the planning stages, planned how we were going to do it, and then eventually implemented it in the region of the latter part of 1970.

Q Did that change in the production floor layout have any effect on production?

A That is one of the things we had to do. It was done so as to not interfere with the production floor, and we accomplished it by laying the factory out into four sections, the bottom floor into two sections, the top floor into two sections, and the small annex at the rear as the fifth, and we hit each section at a time independent from the rest, so that we could continue to work in the other area. What we did was to set up one site, lay it out, wire it out, whatever we had to do, and then we shifted everybody over to the other section.

Q During the measuring year did you have some responsibility with respect to the Magnavox program?

A Yes, I was involved in this in two ways, first, as a test engineer who had been working with the quality control manager, Mike Boyce, and, secondly, as an applications



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engineer working with Phil Wood and Ron Keppel, who was the chief engineer then.

Q Did you continue to participate in this program during the measuring year?

A Yes. This program at that point in time from 1970 was a very complicated core memory and a very, very severe application. It is used in a submarine hunting program for the Defense Department. And when it was conceived it was a very tough program. Plessey had a lot of trouble with it, not only during the measuring year, but since its conception in '68 and all the way through until, I think, late '71.

Q During the measuring year did you and the other employees responsible in building that prototype continue to use your best efforts to do so?

A Yes, I feel so. The problems involved in the stack, as I say, are complex. It was a difficult stack to build. It needed a lot of efforts to get it through.

Q Were you able to build a prototype which could pass the qualifications of testing by March, 1971?

A Were we able to?

Q Yes.

A It was conceivable that we could have done so, but we didn't. We had the material in Barbados at the start of the measuring year. The measuring year is March 31st



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through April 1st.

Q April 1st through March 31st?

A I guess that is only a couple of days off. During that period of time we had the initial prototype hardware down there, the mechanical part of it, the heat sink plates, the main plates for making the core and everything else, and we started working and wiring, weaving the frames, but we had some problem with the frame strips themselves as we went along. As I say, it was a complicated enough problem. We had a lot of problems in it.

Our intention at that point in time was to produce one stack which would be to take to the customer, and that, in fact, was achieved prior to the period in time you are interested in. I believe Ron Keppel took it up there.

And we had a couple of other units in work, and, mainly, to help us figure out the best way to build it and prove out the design.

The first design of the stack was changed at the concept after the first design, and we started on a new, more solid design to stand the severe vibration environment.

Q But no prototype was built and qualified by March 31?

A No. It would have been difficult to qualify the unit. On a time zero we figured it was going to take four months total, and it was a severe assumption, as it turned out.



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But it assumed that our customer, the Magnavox Company, would give us complete approval of all the necessary processes, documentation, quality control instructions, inspection instructions and everything else. They also had to prove all our test sequencing and all the methods we were going to use.

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At that time with Mr. Vangelakos and Mr. Osborne, we felt we had a good rapport with the customer and that was not going to be a problem. As we got into the program during the year, in the latter part of the measuring year, anyway, we found that, in fact, they were extremely picky; they were looking for a very high quality product to withstand extremely severe environmental conditions, and they were extremely anxious to insure that our processes, our build methods, everything else, were acceptable to them and would be a good industrial practice.

Q With regard to the environmental tests, was there a laboratory in Barbados where those could be performed?

A No, absolutely not. As I said, this was an American military program, and the United States Government was extremely anxious to insure that Plessey take any testing or calibration, etc., to their own standards, and those standards are extremely high. There was no place in Barbados that could come close to the requirements. It was a pretty small



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island.

Q Mr. Ballantyne, were you also involved with quality testing of the stacks on the Hewlett Packard contract?

A Yes. There were two Hewlett Packard contracts. One was a 30 mill core, a 30 thousandths of an inch core, and one was a 22 mill core, and they were different in concept, but they were basically both 8,000 by 17, 18 thousandth bits.

Q Do you recall what, if any, difficulties you experienced with the 30 mill stack?

A Yes. We had a variety of returns from the United States, units which the customer had accepted, taken through his incoming inspection and tests and he rejected them and we couldn't find any cause, electrical cause, for rejects in Barbados, and after quite a little bit of trying we discovered that our test gear worked sequentially. We started x zero, y zero, and z zero and scanned all the way up x and y and z, and then went again to x.

In a computer, the computer addresses the words, all the words and reads out 16 bits of data, and we, of course, look at each data bit in sequence, because we are not concerned in an electrical test of a core memory stack whether there is information, what the information is in the core; we are looking for the response of the core to the impulse. So we discovered that the customer was having a problem



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with the stack because of this inter-action between two bits on the z axis. It had been a continuing problem. It had grown as our overall shipment rate grew, and it came to a head in the first quarter of 1970, and we were told when Peter Hewitt arrived to give us assistance in Barbados that as far as he was concerned as production man it was one of his big problems and he wanted a solution.

We tried to find a solution for it and came up with the idea of using the customer's actual computer, using his computer as a diagnostic test to check out our memory, in the initial instances, anyway, just to get a handle on what was the fault, and we recommended to Mr. Hewitt that we purchase a computer, because our customer was willing to sell us one at a very good price, just cost, cost plus shipping.

Q Do you recall how much that was approximately?

A Just by memory, in the region of seven and a half thousand dollars.

Q You recommended the purchase of the computer? Was it purchased?

A It was not purchased at that time. I believe the recommendation didn't go from me; it went from Mike Boyce and Ron Keppel. The three of us discussed it and decided it was a solution, and Mike and Ron went to Peter Hewitt and



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then to Allan Kovar and asked that it be bought, and that request was turned down. As I say, I was not there.

Q After Plessey assumed management control was the recommendation repeated?

A It was repeated, yes, and we received an okay to purchase the machine. We bought it at a rough guess I would say in July or August.

Q What effect did the purchase of the computer have on these problems you had been experiencing with the 30 mill stack?

A It eliminated a lot of transient problems that the customer was seeing and it showed up to us where our other faults were that our own tester could not pick out. It was also a rapid test, much faster than we normally cycle memories, and we used it as the final QC proof.

Q What effect did it have on the reject rate of the customer, if any?

A The reject rate stayed fairly constant for a while and then dropped, because what had happened was they were still seeing intermittent defects in units which we had already shipped. But as soon as we put the computer in we found our rejections from the customer were down. We still had some problems, as there is always some damage caused either in shipment or in workmanship or assembly that you just can't completely eliminate. So there were some.



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Q Mr. Ballantyne, do you have any recollection of participating in the building a prototype for Varian Associates?

A I was involved in that design, not as a chief participant in it, but as an interested third or fourth party helping out, which is basically how we operated down there with only three or four people physically doing the designing, it tended to be a bit of a group effort.

Varian was a particularly complicated stack again for us. It was a flat planar array, but the addressing and decoding methods were unusual for us. We were using a transformer and diode combination that we had very seldom used.

Q I believe it has been established that the original delivery date was some time in February, but the prototype was not delivered until August. Do you have any recollection of what caused that delay?

A The electrical design of the unit, as I say, was complex and the customer requirements were such that we had to lay it out in a large area and get these signals in and out in a large area.

When you are handling very rapid pulses, as we are in a core memory, you are very susceptible to noise, if the length is too much, and for that particular design



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we had several areas where we were receiving noise from other signals within the stack and even in our task we were seeing noise indications, which supports to us that in a computer it would be an extremely electrically noisy environment.

Q Do you recall who designed the Varian prototype?

A Yes, the prototype was designed electrically by Ron Keppel. The layout of the printed wiring board and the mechanical and electromechanical designing was done principally by Phil Wood, who was at that time the supervisor of the drafting area, and a couple of local draftsmen.

Q Do you recall whether Mr. Keppel had any experience in designing this type of prototype?

A I think he had experience and knowledge of the method involved in addressing the stack, yes. Nobody down there had much experience of that particular addressing scheme. It was an unusual scheme and not many people in the computer industry used it. It was a method used by some customers at the start of the computer design era to get the maximum performance out of what then were, shall we say, odd transistors and as the industry developed the transistors got better and the complexity was not really needed and there was a price break, too, but that price break was no longer significant after a while in the



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computer industry.

Q Do you recall that there came a time when Plessey caused an office to be opened in Boston?

A Yes.

Q Do you recall what impact, if any, that had on the operations of ISL during the measuring year?

A In general it helped us rather well because the area chosen by Plessey was near Boston, Maynard, Massachusetts, and that particular area there is a concentration of services and assembly houses around that area which are very much linked in with the computer industry.

As a matter of fact, one of the biggest computer manufacturers, Digital Computers Corporation, its main plant is in Maynard, Massachusetts, and we felt at that point in time, we in Barbados felt that it was a very good move because we immediately had a foothold in an area where our sales and services, particularly our incoming goods, could be easily obtained.

When you are 3000 miles on the island, the sheer logistics of getting items in and out is difficult enough because you can't just pick up a phone and phone a supplier.

Also, and this is really the most important point as far as we were concerned at that point in time,



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is that we moved all of our incoming equipment, inspection procedures and everything else, we moved those to Maynard as soon as Maynard was available to us and it helped us tremendously because instead of sitting down in Barbados and getting an incoming piece part, inspecting it to decide whether it was good enough quality for us to use and then disposing of it either by returning it to the vendor, accepting it and putting it in stock and getting involved in this logistics of having stuff in Barbados we didn't want and we wanted to send back to the vendor and just building in a time delay, we moved that whole thing to Maynard so that the guys in Maynard made the decision whether it was acceptable to the company or not and we had an immediate feedback to the vendor, if there was any problem, and we felt that was one of the better advantages of having a plant in the U.S.

Q Following the assumption of management control by Plessey of ISL operations, what impact, if any, did that have on the performance of the facility in Barbados?

A Well, it helped the people down there a lot morally anyway because we had seen the company was in trouble in late '69. As I say, it is a small company and we weren't, of course, intimately involved with Mr. Kovar's business dealings we didn't know what his specific problems were, but we knew there was something wrong and we knew we were


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tight for money and we also knew that we had had an offer to the company and there was a little bit of, you know, nervousness.

When Plessey took over, although most of the guys down there, the American guys down there didn't know who Plessey were, I managed to persuade them that I knew the company and it was a big company and it was probably going to be very good for us.

I think almost immediately the deal was made, if my memory serves me right anyway, they flew Peter Hewitt in from Lisbon into Barbados to act as an operations manager working for Mr. Kovar and he really got us up to speed very fast. He went in and got us moving again, I suppose, instead of rushing around trying to worry about what was happening to the company, just saying, "Let's get the job done," and helped pull the people together and build up the team spirit again very rapidly, too. That helped us rather a lot. That is what we needed at that point in time.

Q Following the termination of Mr. Kovar on June 9, how was the performance of the company affected during the balance of the measuring year?

A It didn't seem to be significantly affected one way or the other. Mr. Kovar, when he was down there,



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was acting as the president of the company and as the president of the company he was intimately involved any way with the day-to-day operations of the plant. He appeared to be more involved in the operation of the business and the business operation was transferred to the U.S. with Farmingdale doing our purchasing initially and marketing people -- our own marketing people, the ISL people reporting into that area and the decision had, apparently, been made by Plessey that we needed some sort of top-grade operations production help down there and arranged for Mr. Hewitt and after Mr. Hewitt left Mr. Gretton and, consequently, our allegiance had moved on, I suppose, to Peter and David Gretton as the guys we now had to work more strongly for at that time.

Q To your recollection did Plessey do anything during thebalance of the measuring year that caused any loss of existing orders at the plant or interruption of production and delivery of the products during the measuring year?

A Not to my knowledge, no.

MR. MALONEY: I have no further questions, your Honor.



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CROSS EXAMINATION

BY MR. McCONNELL:

Q Mr. Ballantyne, did I understand you to testify that Mr. Hewitt had brought you up to speed very good?

A Yes.

Q And Hewitt was put in charge of production in March, is that correct?

A Yes, just immediately after the Plessey purchase.

Q Within a very short period of time he had things running rather smoothly, did he not?

A No, he had pulled the personnel together to give us impetus to try and sort the problems out. The problems were not such that they were very rapidly solvable.

Q Wasn't the trend up by the time Hewitt left?

A The trand was, yes, but that was not totally involved with the Barbados operation. That was also the Plessey move to give us some help from the Farmingdale area in our purchasing and our material procurement and, if memory serves me correctly, money to pay our vendors off.

Q Was there any friction between the ISL staff and Mr. Hewitt?

A Not a vast friction. Mr. Hewitt is very dynamic and that helped.



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Q Did you believe that you had the engineering capability to build the Magnavox prototype?

A Oh, yes; absolutely.

Q Do you recall that the test fixture for that prototype that was being built by Towcester proved out to be defective?

A Yes, indeed. The text fixture for the unit, it was suggested to us by Plessey that Plessey could make a fixture for us. We needed a fixture for the individual planes. There were 16 planes in the stack and Plessey suggested that they could make the fixture cheaper than the Winter Engineering Company from whom we were buying our fixtures while Mr. Kovar was there.

Q Do you recall when Plessey suggested that?

A It was during a visit by Mr. Jones and that was, I believe, just prior to the purchase. It was in the region of March of 1970.

Q Do you recall that that test jig did not arrive until August from Towcester?

A No, I don't recall when it arrived. I believe that is about the time of year it arrived, yes; July, August, I don't remember specifically.

Q When it proved defective, you scrapped that and you went to Winter Engineering, is that right?



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A We did, indeed. The defect in the fixture was, first of all, mechanical in that it did not align with our drawing. We said, this is what we want and the second one was just ease of usage of the fixture. It wasn't really the kind of thing we could easily use in a production setup.

Q How long after that did it take for Winter Engineering to complete the test fixture or jig?

A I believe six to eight weeks.

Q Do you recall that Keppel was in charge of the Magnavox program?

A Yes, he was. He was the chief engineer at that point in time and he instigated the design at ISL and he got together with Mike Boyce, before Mike arrived at ISL, and started the initial thinking out stages back then, but he was the main operating force behind that whole thing in terms of the mechanical and electrical design anyway.

Q Who was the No. 2 man on that project?

A The No. 2 would be Mike Boyce without a doubt. As I say, the complexity of the stack and the federal regulations necessary to build the stack were such that we needed very complete coverage both in mechanical engineering and quality control, particularly quality control.

Q Do you recall when Mr. Keppel left the company?



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A Yes, it was in August or September of 1970; he left Barbados.

Q Did he ever tell you why he left the company?

A He told me he was being transferred to the United States.

Q After the transfer to the United States, did he then leave and go with another company?

A He did. He joined Dataram Corporation.

Q Did he ever tell you the reason that he left Plessey-ISL and joined Dataram?

A No, he didn't. I have met him since, but he didn't give me a specific reason.

Q Do you recall when Mr. Boyce was transferred to Boston?

A Ye, he was transferred in the latter part of September, 1970. He moved up to the Maynard, Massachusetts, area. By that time it had been agreed or decided that we would have facilities available to us in the H.H. Scott plant in Maynard and we were moving into a small annex of that plant.

Q So that that left just you and Mr. Gretton as the only engineers at Barbados, is that right, after Boyce moved up?

A Electrical engineers, yes.



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Q Do you recall when the Magnavox project was transferred up to Boston?

A Yes, the project at that point in time, the main mechanical and electrical design had been completed, at least on the drawingsas far as we knew it at that point in time, although Magnavox had not yet approved the drawings, we felt it was comparatively straightforward to get their approval on the design. We transferred the drawings relating to the stack and put them in control of the Maynard plant.

I believe also we agreed that the manufacturing engineering, fixtures, the test engineering fixtures, not specifically the plane fixturing, but all the other fixtures necessary to do a stack test would be in Maynard, at least purchased and assembled in Maynard, purchased and ready for us to build Maynard upas a support function of the Barbados plant

Q Do you know when that was done in point of time?

A In point of time?

Q Yes.

Q It would be around November or December of '70 and I believe it was just shortly after Boyce went up, so it was probably the early part of November when we first started getting that stuff over there.

Q Do you recall when the CTC tester was sent up to



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Boston for use with the Magnavox prototype?

A Yes, that was sent up again around the same area in time. The customer practically required that we test on the 201, which is an extremely expensive machine, and we at that time were using the cheaper machine purchased over the previous year or so as our main test unit for main production. We were using a DCE 50-27, which is not nearly as complex as the 201 and not nearly as quiet electrically as the 201. So, we had to ship the 201 way to Maynard.

We were also intending and did, in fact, pass all of our returns, processed them at Maynard



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and passed them through that test sequence. The idea, of course,being if it was a minor fault, it would be corrected immediately by personnel in Maynard. If it was a major fault -- and we had a definition of what was minor and what was major -- it would go to Barbados for re-work.

Q When you were making the production relayout at Barbados --

A Yes.

Q -- I believe you said that you split the plan into four sections. You divided the ground floor into two sections and the second floor into two sections; is that right?

A There was a fifth section, a small annex in the back of the top floor, yes, but basically the main production floors were split into two sections.

Q Was this work going on during the work day, the relayout?

A Yes, we were working somewhere in the region of a 16-hour day, two shifts with maintenance personnel. It was more or less 8 in the morning until midnight. We were, obviously, trying to get it down as rapidly as possible because just the sheer difficulty of moving people and equipment around during the working day.



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Q Do you recall how long from start to finish this relayout took, approximately?

A The implementation of the relayout?

Q Yes.

A Do you mean physically doing the work because you know we had planned and designed the layout of the tables and wehad to procure all that stuff.

Q As I understand your testimony, you planned to do this in stages?

A Right.

Q From the start of the relayout,that is the installation of the individual work stations?

A Okay.

Q Until completion of the whole plant, what would be the time duration?

A I think it was we planned it for between four to six weeks,depending upon the problems, and I believe we accomplished it in about five, just about in the middle of the range.

Q When you completed one section, would you then move the people that were in the section that you weregoing to work on next into the completed section, is that how it worked?

A Right. We doubled up for a little bit and then



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swung them over into the new area.

A So, while this was going on you would have had three relocations of the workers; is that right?

A Yes, right, but, you know, you are only talking about a couple hundred feet of a move.

MR. McCONNELL: That is all.

MR. MALONEY: I have no questions, your Honor.

THE COURT: All right, thank you, Mr. Ballantyne. You are excused.

(Witness excused.)

MR. MALONEY: The defendant calls Milton Albert, your Honor.



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